iGeeks
Bridging Technology

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FINAL YEAR PROJECTS

BE, ME, B. TECH, M. TECH,
MCA, BCA, B.SC,MBA

IEEE PROJECTS

SOFTWARE PROJECTS 2023-24

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Final Year Computer Science Project Ideas

The computer science discipline is still a very popular field of study today, it brings several applications that span a wide range. More often than not, final year students find it quite overwhelming to choose the right project in computer science.

Projects are the only thing that matters on final graduation. One can choose a job or further education in any IT-related industry where projects have a significant effect. Project work demonstrates the depth of knowledge and some soft skills, such as creativity and problem solving. The final year Projects will also improve your interview prospects. Therefore, it is necessary and mandatory for students to complete a project in their final year of graduation.

What Is a Project?

Project work is a collection of activities that offers students the opportunity to learn do independent research and conduct independent action based on their skills, interests, and personal experiences.

An instructor or other guide observes and guides the project work as it progresses.

What Is the Domain?

In general, a domain is a particular field of thought, activity, or interest, especially one over which you have control and know in and out. Computer science indicates the domain of interest.

Best Domain to Choose for Conducting the Projects

- Artificial intelligence
- Web Technology
- Data Science
- Machine Learning
- IoT

Machine Learning Projects for Students

Machine learning involves the use of artificial intelligence that allows machines to learn a task from experience without programming them specifically for that task. This process starts with providing quality data and then training the machines by building different machine learning models using the data and different algorithms. As revolutionary as they seem, a machine learning project can be incredibly challenging without the guidance of a professional expert or practitioner. Every machine learning project is fraught with different challenges.

Igeeks Technologies students often turn to us for consultation and help with their machine learning projects. Common problems that students face in their machine learning projects include data complexity or even lack of data, data labeling problems, and lack of resources or time. All of the above problems sabotage their machine learning project and dampen their learning experience.

To help students solve these problems and complete their machine learning projects, Igeeks has come up with a special wing for machine learning projects.

Deep Learning Projects for Students

In today's era, the demand for artificial intelligence and machine learning is increasing. There are also many applications for deep learning, from recommender systems to image processing. Deep learning is an artificial intelligence (AI) capability that simulates the functions of the human brain in processing data and creating patterns used in advanced cognitive processes. Deep learning is a subset of machine learning in artificial intelligence.

The best way to teach truly powerful AI is through deep learning with great real-world applications. Choosing the right deep learning project is a solid first step for any student looking to ground and build a career in the challenging field of AI/ML.

If you're one of them, Igeeks Projects offers a "Deep Learning Project for Students" that can simplify the process.

IoT Projects for Engineering Students

IoT stands for Internet of things. It is a new form of internet connectivity through which various physical electronic devices can be connect to each other over the internet. When various electronic and hardware devices are connected using this technology they can communicate with each other, monitor and control each other over the internet. With the advancement in this technology, implementation of various type of efficient, accurate systems such as remote patient health monitoring system, the energy meter reading system over the internet etc... Has become reality. With its increasing popularity, engineering graduates are adapting this technology for many mini and major projects.

Therefore, any student looking to execute the latest IoT projects must have at least a basic idea about these frameworks, tools and technology. That said, even if you feel you fall short of sufficient knowledge in any of these topics, **Igeeks** is here to help you successfully execute the latest IoT projects

PYTHON – ML, AI, NN, IP, DL SOFTWARE BASED PROJECT TITLES	
IPMA001	21_IEEE_MONITORING PANDEMIC PRECAUTIONARY PROTOCOLS USING REAL-TIME SURVEILLANCE AND ARTIFICIAL INTELLIGENCE
IPMA002	DEEP-LEARNING-BASED ROAD CRACK DETECTION FRAMEWORKS FOR DASHCAM-CAPTURED IMAGES
IPMA003	A FRAMEWORK FOR ANALYSIS OF ROAD ACCIDENTS
IPMA004	25_PY_SUICIDAL IDEATION DETECTION: A REVIEW OF MACHINE LEARNING METHODS AND APPLICATIONS
IPMA005	26_PY_SOCIAL DISTANCING DETECTION FOR COVID-19 USING OPENCV AND DEEP LEARNING
IPMA006	27_PY_PREDICTING ANXIETY DEPRESSION AND STRESS IN MODERN LIFE USING DASS21 QUESTIONNAIRE DATASET
IPMA007	28_PY_FEATURES EXTRACTION AND CLASSIFICATION FOR DETECTION OF KIDNEY STONE REGION IN ULTRASOUND IMAGES

IPMA008	29_PY_PREDICTING EXPLOSIVE GAS COMPONENTS USING MACHINE LEARNING
IPMA009	30_PY_PERFORMANCE EVALUATION OF ML CREDIT CARD FRAUD DETECTION
IPMA010	32_PY_20_IN-DEPTH SURVEY TO DETECT, MONITOR AND MANAGE CROWD
IPMA011	33_PY_FAKE CURRENCY DETECTION USING DIGITAL IMAGE PROCESSING
IPMA012	35_PY_GENDER RECOGNITION BY VOICE USING AN IMPROVED ML ALGORITHM
IPMA013	36_PY_IMAGE PROCESSING FOR MANGO RIPENING STAGE DETECTION
IPMA014	15_PY_MACHINE LEARNING TECHNIQUES FOR STRESS PREDICTION IN WORKING EMPLOYEES
IPMA015	16_PY_INTRADAY STOCK PRICE FORECASTING USING AN AUTO REGRESSIVE TIME SERIES MODEL – ARIMA
IPMA016	16_PY_NIFTY INDEX PREDICTION APPROACH FOR STOCK MARKET VOLATILITY BASED ON TIME SERIES – ARIMA
IPMA017	17_PY_HEART DISEASE IDENTIFICATION METHOD USING MACHINE LEARNING CLASSIFICATION IN E-HEALTHCARE
IPMA018	18_PY_LOAN APPROVAL PREDICTION BASED ON MACHINE LEARNING APPROACH
IPMA019	19_PY_FRUIT DISEASE CLASSIFICATION AND IDENTIFICATION USING IMAGE PROCESSING
IPMA020	20_PY_CLASIFICATION OF MEDICINAL PLANTS BY VISUAL CHARACTERISTICS OF FLOWERS
IPMA021	21_PY_KRISHI SADANA - PESTS CLASSIFICATION AND DETECTION USING MACHINE LEARNING
IPMA022	22_PY_COVID-19 FUTURE FORECASTING OF DEATH RATE USING ML
IPMA023	25_PY_SUICIDAL IDEATION DETECTION A REVIEW OF ML METHODS
IPMA024	CROP PREDICTION AND EFFICIENT USE OF FERTILIZERS USING MACHINE LEARNING
IPMA025	MACHINE LEARNING ANALYSIS OF AIRBREATHING PROPULSION OF TUROJET ENGINE
IPMA026	MACHINE LEARNING TECHNIQUES FOR STRESS PREDICTION IN WORKING EMPLOYEES
IPMA027	COVID-19 FUTURE FORECASTING OF DEATH RATE USING SUPERVISED MACHINE LEANING ALGORITHM
IPMA028	1_PY_MACHINE LEARNING APPROACH FOR AIR QUALITY PREDICTION AND ANALYSIS
IPMA029	2_PY_FEATURE EXTRACTOR ANALYSIS FOR TRAFFIC CLEARANCE IN EMERGENCY FOR AMBULANCE
IPMA030	3_PY_SKIN DISEASE RECOGNITION CNN
IPMA031	3_PY_SKIN DISEASE RECOGNITION METHOD BASED ON IMAGE COLOR AND TEXTURE FEATURES
IPMA032	5_PY_ARTIFICAL INTELLIGENCE BASED MATERIAL SORTING FOR INDUSTRIAL PRODUCTION
IPMA033	6_PY_CNN BASED LEAF DISEASE IDENTIFICATION AND REMEDY RECOMMENDATION SYSTEM
IPMA034	8_PY_VIRTUAL TRY ON SYSTEM FOR GARMENTS OUTLETS
IPMA035	14_PY_MACHINE LEARNING BASED BRAIN TUMOR ANALYSIS USING CONVOLUTIONAL NEURAL NETWORK
IPMA036	14_PY_DEEP LEARNING FOR MULTIGRADE BRAIN TUMOR CLASSIFICATION IN SMART HEALTHCARE SYSTEMS A PROSPECTIVE SURVEY
IPMA037	STRESS PREDICTION OF PROFESSIONAL STUDENTS USING MACHINE LEARNING
IPMA038	A PREDICTION APPROACH FOR STOCK MARKET VOLATILITY BASED ON TIME SERIES DATA
IPMA039	A WAVELET BASED DEEP LEARNING METHOD FOR UNDERWATER IMAGE SUPER RESOLUTION

	RECONSTRUCTION
IPMA040	DEEP NEURAL NETWORK ARCHITECTURE APPLICATION FOR FACIAL EXPRESSION RECOGNITION
IPMA041	COVID-19 SOCIAL DISTANCING DETECTOR IN VIDEO
IPMA042	MACHINE LEARNING METHODS FOR DISEASE PREDICTION WITH CLAIMS DATA
IPMA043	TIME SERIES PREDICTION OF AGRICULTURAL PRODUCTS PRICE BASED ON TIME ALIGNMENT OF RNN
IPMA044	AN EFFICIENT EDGE DETECTION APPROACH TO PROVIDE BETTER EDGE CONNECTIVITY FOR IMAGE ANALYSIS
IPMA045	GENDER CLASSIFICATION USING SENTIMENT ANALYSIS AND DEEP LEARNING IN A HEALTH WEB FORUM
IPMA046	CNN BASED LEAF DISEASE IDENTIFICATION AND REMEDY RECOMMENDATION SYSTEM
IPMA047	IDENTIFICATION OF PLANT DISEASE USING IMAGE PROCESSING TECHNIQUE
IPMA048	EFFECTIVE HEART DISEASE PREDICTION USING HYBRID MACHINE LEARNING TECHNIQUES
IPMA049	COMPARISON OF MACHINE LEARNING METHODS FOR BREAST CANCER DIAGNOSIS
IPMA050	CLUSTERS OF FEATURES USING COMPLEMENTARY INFORMATION APPLIED TO GENDER CLASSIFICATION FROM FACE IMAGES
IPMA051	AIR LEARNING INTERPOLATION, PREDICTION, AND FEATURE ANALYSIS OF FINE-GRAINED AIR QUALITY
IPMA052	FACE RECOGNITION AND AGE ESTIMATION IMPLICATIONS OF CHANGES IN FACIAL FEATURES
IPMA053	A PREDICTIVE DATA FEATURE EXPLORATION-BASED AIR QUALITY PREDICTION APPROACH
IPMA054	EFFECTIVE HEART DISEASE PREDICTION USING HYBRID MACHINE LEARNING TECHNIQUES
IPMA055	DEVELOPMENT OF A FULLY CROSS-VALIDATED BAYESIAN NETWORK APPROACH FOR LOCAL CONTROL PREDICTION IN LUNG CANCER
IPMA056	MACHINE LEARNING ANALYSIS OF SPEECH DETECTS ANXIETY AND DEPRESSION IN EARLY CHILDHOOD

PYTHON – ML, AI, NN, IP, DL BASED PROJECTS USING SOFWARE WITH HARDWARE TITLES	
IPMH001	CROP PREDICTION AND EFFICIENT USE OF FERTILIZERS USING MACHINE LEARNING
IPMH002	ML USING SENSORS FOR AIR BREATHING PROPULSION OF TURBOJET ENGINE
IPMH003	ML USING SENSORS FOR STRESS PREDICTION IN WORKING EMPLOYEES
IPMH004	REAL TIME FACE MASK DETECTOR FOR COVID-19 SAFE SOCIAL DISTANCING
IPMH005	ARTIFICIAL INTELLIGENCE BASED MATERIAL SORTING FOR INDUSTRIAL PRODUCTION
IPMH006	1_PYEM_TERRORBOT – CASCADE CLASSIFIER TO DETECT TERRORIST AND SOLDIERS
IPMH007	2_PYEM_HUMAN STRESS ANALYSIS USING SENSORS AND MACHINE LEARNING TECHNIQUES
IPMH008	3_PYEM_FEATURE EXTRACTION BASED AIRPORT BAGGAGE CONVEYOR ALERT SYSTEM
IPMH009	4_PYEM_AUTOMATIC CONTROL OF DRIVER FATIGUE AND DROWSINESS LANDMARK PREDICTOR

IPMH010	5_PY_ARTIFICAL INTELLIGENCE BASED MATERIAL SORTING FOR INDUSTRIAL PRODUCTION
IPMH011	6_PY_CNN BASED LEAF DISEASE IDENTIFICATION AND REMEDY RECOMMENDATION SYSTEM
IPMH012	7_PYEM_FEATURE EXTRACTOR ANALYSIS FOR TRAFFIC CLEARANCE IN EMERGENCY FOR AMBULANCE AND FIRE ENGINES
IPMH013	8_PYEM_DEVELOPMENT OF FOOD TRACKING SYSTEM USING MACHINE LEARNING
IPMH014	9_PYEM_TRAINABLE AUTOMATIC ROBOT FOR AGRICULTURE PLANT LEAF WEEDING
IPMH015	10_PYEM_MACHINE LEARNING APPROACH FOR AIR QUALITY PREDICTION AND ANALYSIS
IPMH016	11_PYEM_ML ANALYSIS OF EMOTION DETECTS, ANXIETY AND DEPRESSION IN ADULT
IPMH017	12_PYEM_MACHINE LEARNING APPLIED TO ELECTRIFIED VEHICLE BATTERY SOC AND SOH ESTIMATION
IPMH018	13_PYEM_REAL-TIME EYE TRACKING FOR PASSWORD - GAZE BASED PIN AUTHENTICATION
IPMH019	14_PY_MACHINE LEARNING BASED BRAIN TUMOR ANALYSIS USING CNN WITH SMS NOTIFICATION
IPMH020	15_PYEM_MOTORCYCLE HELMET WEAR ANALYSIS USING SIFT FEATURE EXTRACTOR
IPMH021	16_PYEM_MACHINE LEARNING BASED FINGER GESTURE RECOGNITION FROM HOSPITAL ASSISTANT
IPMH022	17_PYEM_HUMAN ACTIVITY ANALYSIS USING SENSORS AND MACHINE LEARNING TECHNIQUES
IPMH023	18_PYEM_CROP PREDICTION AND EFFICIENT USE OF FERTILIZERS USING MACHINE LEARNING
IPMH024	19_PYEM_COVID-19 FACE MASK DETECTION WITH TEMPERATURE AND AUTO SANITIZER
IPMH025	19_PYEM_REAL TIME FACE MASK DETECTOR FOR COVID-19 SAFE SOCIAL DISTANCING
IPMH026	21_PYEM_ML APPROACH FOR AIR QUALITY PREDICTION AND ANALYSIS
IPMH027	26_PYEM_MONITORING SOCIAL DISTANCING FOR COVID-19 USING OPENCV AND AUTO SANITIZATION
IPMH028	FACE RECOGNITION AND AGE ESTIMATION IMPLICATIONS OF CHANGES IN FACIAL FEATURES
IPMH029	CVUCAMS: COMPUTER VISION BASED UNOBTRUSIVE CLASSROOM ATTENDANCE MANAGEMENT SYSTEM
IPMH030	IP-SUPER-PIXEL BASED FINGER EARTH MOVER'S DISTANCE FOR HAND GESTURE RECOGNITION
IPMH031	ACCELEROMETER-BASED HUMAN FALL DETECTION USING CNN
IPMH032	INDUSTRIAL MACHINE SHOP FLOOR OPERATOR EYE CLOSURE AND YAWNING ANALYSIS AND CONTROL USING LANDMARK PREDICTOR
IPMH033	SLEEPY BEHIND STUDIES - STUDENT DROWSINESS CONTROL USING LANDMARK PREDICTOR
IPMH034	STUDENT EYES CLOSURE AND YAWNING DETECTION FOR DROWSINESS ANALYSIS USING LANDMARK PREDICTOR
IPMH035	EMOPLAYER - FEATURE EXTRACTOR APPROACH FOR EMOTION BASED MUSIC PLAYER
IPMH036	MODIFIED CONVOLUTIONAL NEURAL NETWORK ARCHITECTURE ANALYSIS FOR FACIAL EMOTION RECOGNITION
IPMH037	ELDERLY ASSISTANT BASED ON FACE EMOTION AND POSTURE ANALYSIS
IPMH038	FACE FEATURE EXTRACTOR FOR EMOTION ANALYSIS AND BEHAVIOR ANALYSIS OF A

	PRISONER
IPMH039	SOIL CLASSIFICATION USING MACHINE LEARNING METHODS AND CROP SUGGESTION BASED ON SOIL SERIES
IPMH040	CLUSTERS OF FEATURES USING COMPLEMENTARY INFORMATION APPLIED TO GENDER CLASSIFICATION
IPMH041	FINGERPRINT IMAGE IDENTIFICATION FOR CRIME DETECTION
IPMH042	A NOVEL CASCADE CLASSIFIER OF VEHICLE UNLOCKING SYSTEM BASED ON FACE RECOGNITION
IPMH043	DEEP LEARNING-BASED HELMET WEAR ANALYSIS OF A MOTORCYCLE RIDER FOR INTELLIGENT SURVEILLANCE
IPMH044	RESTRICTED ZONE SIFT FEATURE EXTRACTOR FOR ATM SECURITY, HELMET DETECTION
IPMH045	ACCELEROMETER-BASED HUMAN FALL DETECTION USING CONVOLUTIONAL NEURAL NETWORKS
IPMH046	A NOVEL CASCADE CLASSIFIER OF VEHICLE UNLOCKING SYSTEM BASED ON FACE RECOGNITION

LIST OF LATEST MACHINE LEARNING PROJECTS

ML	IEEE PROJECT TITLES ON SOFTWARE MACHINE LEARNING
IEML001	DETECTION & PREDICTION OF PESTS/DISEASES USING MACHINE LEARNING
IEML002	STUDENT ATTENTIVE ANALYSIS USING COMPUTER VISION APPROACHES AND DEEP LEARNING.
IEML003	COMPUTER VISION BASED FOOD RECOGNITION WITH NUTRITION ANALYSIS
IEML004	A COMPARATIVE ANALYSIS OF CREDIT CARD FRAUD DETECTION USING MACHINE LEARNING TECHNIQUES
IEMLOOS	ACCIDENT SEVERITY DETECTION AND PREDICTION USING MACHINE LEARNING TECHNIQUES
IEML006	AN ANALYSIS OF CONSUMER BEHAVIOR ON BLACK FRIDAY
IEML007	AUTOMATIC NUMBER PLATE RECOGNITION USING CNN
IEML008	BIRD SPECIES IDENTIFICATION USING DEEP LEARNING
IEML009	DEEP CNN FOR PLANT DISEASE CLASSIFICATION
IEML010	FACE ANTI-SPOOFING, FACE PRESENTATION ATTACK DETECTION USING DEEP LEARNING
IEML011	HANDWRITTEN TEXT RECOGNITION USING ML
IEML012	IMAGE DEBLURRING AND SUPER-RESOLUTION USING CNN
IEML013	JOB SATISFACTION AND EMPLOYEE TURNOVER IN ORGANIZATIONS USING MACHINE LEARNING TECHNIQUES
IEML014	MACHINE LEARNING METHODS FOR MALWARE DETECTION AND CLASSIFICATION
IEML015	MUSIC GENRE CLASSIFICATION USING DEEP LEARNING
IEML016	PARKINSON'S DISEASE DETECTION FROM DRAWING MOVEMENTS USING CONVOLUTIONAL NEURAL NETWORKS
IEML017	PHISHING-WEBSITE-DETECTION
IEML018	RAINFALL PREDICTION USING MACHINE LEARNING

IEML019	REAL-TIME VEHICLE MAKE AND MODEL RECOGNITION USING CNN
IEML020	VIDEO CLASSIFICATION USING DEEP CNN
IEML021	VOICE BASED GENDER CLASSIFICATION USING MACHINE LEARNING ALGORITHM
IEML022	MACHINE LEARNING BASED AUTOMATED FACE RECOGNITION AND PERSONALITY CLASSIFICATIONS
IEML023	LEAF DISEASE DETECTION AND RECOGNISATION USING MACHINE LEARNING
IEML024	CROP YIELD PREDICTION BASED ON INDIAN AGRICULTURE USING MACHINE LEARNING
IEML025	FACIAL EMOTION RECOGNITION USING CONVOLUTION NEURAL NETWORK
IEML026	RISK PREDICTION OF CHRONIC KIDNEY DISEASE USING MACHINE LEARNING ALGORITHMS
IEML027	A MACHINE LEARNING APPROCH FOR AUTOMATION OF RESUME RECOMMENDATION SYSTEM
IEML028	HEART DISEASE PREDICTION USING MACHINE LEARNING
IEML029	COVID-19 MACHINE LEARNING APPROCHES FOR DIAGNOSIS AND TREATMENT
IEML030	AN APPRAISAL ON SPEECH AND EMOTION RECOGNITION TECHNOLOGIES BASED ON MACHINE LEARNING
IEML031	A MACHINE LEARNING BASED APPROACH FOR DETECTION OF ALZHEIMERS DISEASE USING ANALYSIS OF HIPPOCAMPUS REGION FROM MRI SCAN
IEML032	ANALYSIS OF WOMEN SAFETY IN INDIAN CITIES USING MACHINE LEARNING ON TWEETS
IEML033	DETECTION OF PHISHING WEBSITES BY SING MACHINE LEARNING BASED ON URL ANALYSIS
IEML034	APPLICABILITY OF MACHINE LEARNING IN SPAM AND PHISHING EMAIL FLTERING: REVIEW AND APPROACHES
IEML035	HOUSE PRICE PREDICTION USING MACHINE LEARNING
IEML036	IDENTIFYING BENIFICAL SESSION IN AN E-LEARNING SYSTEM USING MACHINE LEARNING TECHNIQUES
IEML037	CRIME PREDICTION AND ANALYSIS USING MACHINE LEARNING

LIST OF LATEST ARTIFICIAL INTELLIGENCE PROJECTS:

AI	IEEE PROJECT TITLES ON ARTIFICIAL INTELLIGENCE[SOFTWARE IMPLEMENTATION]
IEAI001	A RECURRENT UNIT APPROACH TO BITCOIN MARKET PRICE PREDICTION
IEAI002	LEAF RECOGNITION BASED ON ELLIPTICAL HALF GABOR AND MAXIMUM GAP LOCAL LINE DIRECTION PATTERN
IEAI003	A SECURE AI-DRIVEN ARCHITECTURE FOR AUTOMATED INSURANCE SYSTEMS: FRAUD DETECTION AND RISK
IEAI004	MEASUREMENT
IEAI005	WEAKLY SUPERVISED LEARNING FOR RAINDROP REMOVAL ON A SINGLE IMAGE
IEAI006	IDENTIFYING BENEFICIAL SESSIONS IN AN E-LEARNING SYSTEM USING MACHINE LEARNING TECHNIQUES
IEAI007	EARTHQUAKE PREDICTION BASED ON SPATIO-TEMPORAL DATA MINING:AN LSTM NETWROK APPROACH

IEAI008	DETECTION OF DISEASE IN COTTON LEAF USING ARTIFICAL NEURAL NETWORK

LIST OF LATEST PROJECTS ON MACHINE LEARNING USING HARDWARE:

ML	MACHINE LEARNING USING HARDWARE BASED PROJECT[SOFTWARE WITH HARDWARE]
IMLH001	A DEEP LEARNING ALGORITHM FOR DETECTION OF POTASSIUM DEFICIENCY IN A RED GRAPEVINE AND SPRAYING ACTUATION USING RASPBERRY PI3
IMLH002	AI BASED PILOT SYSTEM FOR VISUALLY IMPAIRED PEOPLE
IMLH003	AIR QUALITY MONITORING AND PREDICTION USING MACHINE LEARNING
IMLH004	AN INTERNET OF THINGS BASED SMART WASTE MANAGEMENT SYSTEM USING LORA AND TENSOR FLOW DEEP LEARNING MODEL
IMLH005	ARTIFICAL INTELLIGENCE AND AUGMENTED REALITY DRIVEN HOME AUTOMATION
IMLH006	AUTOMATED CROWD MANAGEMENT IN BUS TRANSPORT SERVICE
IMLH007	AUTOMATED EVALUATION OF COVID-19 RISK FACTORS COUPLED WITH REAL-TIME,INDOOR,PERSONAL LOCALIZATION DATA FOR POTENTIAL DISEASE IDENTIFICATION,PREVENTION AND SMART QUARANTING
IMLH008	CLOUD BASED FACE AND SPPECH RECOGNITION FOR ACCESS CONTROL APPLICATIONS
IMLH009	DEVELOPMENT OF A HAND HELD DEVICE FOR AUTOMATIC LICENSE PLATE RECOGNITION
IMLH010	RASPBERRY PI BASED WEARABLE READER FOR VISUALLY IMPAIRED PEOPLE WITH HAPTIC FEEDBACK
IMLH011	READER AND OBJECT DETECTOR FOR BLIND
IMLH012	LOW-COST VISUALLY SERVOED TRACKED VEHICLE
IMLH013	DEVELOPMENT OF MULTI SECURE ACCESS-SMART SUITCASE SECURITY SYSTEM
IMLH014	FIRE ALARM SYSTEM FOR SMART CITIES USING EDGE COMPUTING

LIST OF LATEST PROJECTS ON ARTIFICIAL INTELLIGENCE USING HARDWARE:

AI	IEEE LATEST PROJECTS ON IOT WITH ARTIFICIAL INTELLIGENCE[SOFWARE WITH HARDWARE]
IAI001	FABRICATION OF AGRIBOT WITH CROP PREDICTION USING MACHINE LEARNING
IAI002	DESIGNING OF AN AUTOMATED SYSTEM FOR IDENTIFICATION AND RECKONING OF LIVESTOCK
IAI003	MULTIAGENT ARCHITECTURE FOR BRIDGE CAPACITY MEASUREMENT SYSTEM USING WIRELESS SENSOR NETWORK AND WEIGHT IN MOTION
IAI004	ANALYSIS AND PREDICTION OF AIR QUALITY MONITORING SYSTEM USING MACHINE LEARNING
IAI005	INFANT CARE ASSISTANT USING MACHINE LEARNING, AUDIO PROCESSING , IMAGE PROCESSING AND IOT SENSOR NETWORK
IAI006	AN INTERNET OF THINGS (IOT) BASED SMART WASTE MANAGEMENT AND MONITORING

	SYSTEM
IAI007	A WIRELESS SENSOR NETWORK BASED LOW COST AND ENERGY EFFICIENT FRAME WORK FOR PRECISION AGRICULTURE
IAI008	IOT BASED TRAFFIC SIGN DETECTION AND VIOLATION CONTROL
IAI009	FABRICATION OF AGRIBOT WITH GREEN LEAF DISEASE DETECTION SYSTEM
IAI010	EFFICIENT CROP YIELD PREDICTION SYSTEM USING MACHINE LEARNING
IAI011	RTO SURVAILANCE SYSTEM WITH INTELLIGENT AMBULANCE DETECTION AND BLIND SPOT TRAFFIC LIGHT DETECTION
IAI012	AN INTERNET OF THINGS (IOT) BASED SMART CITY MANAGEMENT
IAI013	THE PROSPECTIVITY OF BIOSENSING IN ENVIRONMENTAL MONITORING FOR BIOSECURITY
IAI014	IDENTIFICATION AND RECKONING OF LIVESTOCK FOR CATTLE FARMING USING IOT
IAI015	AUTOMATED SURVEILLANCE ROBOT FOR HIGH ALTITUDE REGIONS
IAI016	IMAGE PROCESSING BASED POTHOLE DETECTING SYSTEM FOR DRIVING ENVIRONMENT
IAI017	HEART DISEASE PREDICTION USING IOT AND ML BASED HEALTH MONITORING SYSTEM
IAI018	MONITORING AND MAINTENANCE OF HIGHWAY BRIDGES USING WIRELESS SENSOR NETWORKS
IAI019	MYRIO BASED MOBILE ROBOT FOR RESCUE COMPETITIONS
IAI020	BIOMETRIC BASED SECURED REMOTE ELECTRONIC VOTING SYSTEM
IAI021	INTERNET FOR BANK LOCKER SECURITY SYSTEM
IAI022	24X7 SMART IOT BASED INTEGRATED HOME SECURITY SYSTEM

LIST OF LATEST DEEP LEARNING PROJECTS USING HARDWARE:

	DEEP LEARNING PROJECTS USING HARDWARE[SOFTWARE WITH HARDWARE]
IDP001	AN INTERNET OF THINGS BASED SMART WASTE MANAGEMENT SYSTEM USING LORA AND TENSORFLOW DEEP LEARNING MODEL
IDP002	TENSORFLOW DEEP LEARNING MODEL AND IOT DRIVEN SMART CITY PROTOTYPE WITH LORA
IDP003	A NEW IOT GATEWAY FOR ARTIFICIAL INTELLIGENCE IN AGRICULTURE
IDP004	DRIVER INATTENTION MONITORING SYSTEM BASED ON THE ORIENTATION OF THE FACE USING CONVOLUTIONAL NEURAL NETWORK
IDP005	REVERSE
IDP006	DEEP LEARNING BASED ROBOT FOR AUTOMATICALLY PICKING UP GARBAGE
IDP007	AI BASED VOICE ASSISTANT SYSTEM FOR VISUALLY IMPAIRED PERSON
IDP008	REAL TIME FACE RECOGNITION USING CONVOLUTIONAL NEURAL NETWORK
IDP009	ARTIFICIAL INTELLIGENCE AND AUGMENTED REALITY DRIVEN HOME AUTOMATION
IDP010	CONVOLUTIONAL NEURAL NETWORK BASED WORKING MODEL OF SELF DRIVING CAR - A STUDY

IDP011	DEEP LEARNING BASED SMART GARBAGE CLASSIFIER FOR EFFECTIVE WASTE MANAGEMENT
IDP012	AI BASED PILOT SYSTEM
IDP013	CONVOLUTIONAL NEURAL NETWORK IOT BASED TRAFFIC SIGN DETECTION AND VIOLATION CONTROL

LIST OF LATEST BLOCKCHAIN PROJECTS:

BC	IEEE PROJECT TITLES ON BLOCKCHAIN
IBC001	A BLOCKCHAIN ASSISTED VEHICULAR PSEUDONYM ISSUANCE AND MANAGEMENT SYSTEM FOR CONDITIONAL PRIVACY ENHANCEMENT
IBC002	A TRUNCATED SVD-BASED ARIMA MODEL FOR MULTIPLE QOS PREDICTION IN MOBILE EDGE COMPUTING
IBC003	BLOCKCHAIN AND AI-EMPOWERED SOCIAL DISTANCING SCHEME TO COMBAT COVID-19 SITUATIONS
IBC004	BLOCKCHAIN AND AUTONOMOUS VEHICLES: RECENT ADVANCES AND FUTURE DIRECTIONS
IBC005	BLOCKCHAIN FOR WASTE MANAGEMENT IN SMART CITIES: A SURVEY
IBC006	BOOSTING THE DECISION-MAKING IN SMART PORTS BY USING BLOCKCHAIN
IBC007	EFFICIENT CERTIFICATION OF ENDPOINT CONTROL ON BLOCKCHAIN
IBC008	FAKE MEDIA DETECTION BASED ON NATURAL LANGUAGE PROCESSING AND BLOCKCHAIN APPROACHES
IBC009	IMPACT OF SAVING ATTACKS ON BLOCKCHAIN CONSENSUS
IBC010	BLOCKCHAIN-BASED SELF-TELLYING VOTING SYSTEM WITH SOFTWARE UPDATES IN DECENTRALIZED

NS2 Projects – Network simulator 2 is a simulation tool for performing various network simulations using C++ and TCL programming languages. I run NS2 projects because it is very useful for engineering students to run their projects in a simulated environment. Network Simulator (version 2), commonly known as NS2, is an event-driven simulation tool useful for investigating the dynamic nature of communications. Various NS2 simulation projects have been done for B.E, B.Tech and M.Tech students. It offers flexible simulation tools such as NS2. Using simple commands, you can implement an Ns2 project, define network settings, and define new protocols using C++.

NETWORKING PROJECT LIST (NS2 / NS3)

	MANETS
1	THE METHOD OF DATA COLLECTION BASED ON MULTIPLE MOBILE NODES FOR WIRELESS SENSOR NETWORK
2	EXPLORING THE IMPACT OF NODE CORRELATION ON TRANSMISSION REUSE IN MANETS
3	EFFICIENT ROUTE DISCOVERY AND LINK FAILURE DETECTION MECHANISMS FOR SOURCE ROUTING PROTOCOL IN MOBILE AD-HOC NETWORKS
4	MULTIPATH ROUTING AND MPTCP-BASED DATA DELIVERY OVER MANETS
5	AN ADAPTIVE ON-DEMAND MULTIPATH ROUTING PROTOCOL WITH QOS SUPPORT FOR HIGH-SPEED MANET
6	A MULTI-PATH ROUTING PROTOCOL BASED ON LINK LIFETIME AND ENERGY CONSUMPTION PREDICTION FOR MOBILE EDGE COMPUTING
7	GRAPH KERNEL BASED CLUSTERING ALGORITHM IN MANETS
8	MITIGATION OF BLACK HOLE AND GRAY HOLE ATTACK USING SWARM INSPIRED ALGORITHM WITH ARTIFICIAL NEURAL NETWORK
9	DUAL-CHANNEL-BASED MOBILE AD HOC NETWORK ROUTING TECHNIQUE FOR INDOOR DISASTER ENVIRONMENT
10	ANALYSIS OF ROUTE STABILITY IN MOBILE MULTIHOP NETWORKS UNDER RANDOM WAYPOINT MOBILITY
11	A TIME INTERVAL BASED BLOCKCHAIN MODEL FOR DETECTION OF MALICIOUS NODES IN MANET USING NETWORK BLOCK MONITORING NODE
12	PERFORMANCE EVALUATION AND ANALYSIS OF PROACTIVE AND REACTIVE MANET PROTOCOLS AT VARIED SPEEDS
13	A NETWORK LIFETIME EXTENSION-AWARE COOPERATIVE MAC PROTOCOL FOR MANETS WITH OPTIMIZED POWER CONTROL
14	DESIGN AND IMPLEMENTATION OF AN EFFICIENT MULTIPATH AODV ROUTING ALGORITHM FOR MANETS
15	RESOURCE ALLOCATION FOR PERFORMANCE ENHANCEMENT IN MOBILE AD HOC NETWORKS
16	BP-AODV: BLACKHOLE PROTECTED AODV ROUTING PROTOCOL FOR MANETS BASED ON CHAOTIC MAP
17	PERFORMANCE ANALYSIS OF OLSR PROTOCOL FOR MANETS UNDER REALISTIC MOBILITY MODEL
18	CREDND: A NOVEL SECURE NEIGHBOR DISCOVERY ALGORITHM FOR WORMHOLE ATTACK

	FLYING ADHOC NETWORKS (FANETS) AND UNMANNED AERIAL VEHICLE (UAV)
1	AN EFFICIENT AND PROVABLY SECURE CERTIFICATE LESS KEY-ENCAPSULATED SIGNCRYPTION SCHEME FOR FLYING AD-HOC NETWORK
2	SMART IOT CONTROL-BASED NATURE INSPIRED ENERGY EFFICIENT ROUTING PROTOCOL FOR FLYING AD HOC NETWORK (FANET)
3	MOBILITY AND LOCATION-AWARE STABLE CLUSTERING SCHEME FOR UAV NETWORKS
4	FANET BASED EMERGENCY HEALTHCARE DATA DISSEMINATION

5	RENDEZVOUS: OPPORTUNISTIC DATA DELIVERY TO MOBILE USERS BY UAVS THROUGH TARGET TRAJECTORY PREDICTION
6	ENERGY-EFFICIENT UAV-TO-USER SCHEDULING TO MAXIMIZE THROUGHPUT IN WIRELESS NETWORKS
7	LAOD: LINK AWARE ON DEMAND ROUTING IN FLYING AD-HOC NETWORKS
8	AN OPTIMIZATION ROUTING PROTOCOL FOR FANETS
9	GEOLOCATION BASED ROUTING FOR FLYING ADHOC NETWORKS
10	TARCS: A TOPOLOGY CHANGE AWARE-BASED ROUTING PROTOCOL CHOOSING SCHEME OF FANETS
11	EVALUATION OF AODV AND DSDV ROUTING PROTOCOLS FOR A FANET: FURTHER RESULTS TOWARDS ROBOTIC VEHICLE NETWORKS
12	CONSIDERING AODV AND OLSR ROUTING PROTOCOLS TO TRAFFIC MONITORING SCENARIO IN FANET FORMED BY MINI-UAVS
13	FS-MAC: AN ADAPTIVE MAC PROTOCOL WITH FAULT-TOLERANT SYNCHRONOUS SWITCHING FOR FANETS
14	PERFORMANCE EVALUATION OF UAV-ASSISTED MMWAVE OPERATION IN MOBILITY-ENABLED URBAN DEPLOYMENTS
15	ENERGY-EFFICIENT DATA GATHERING FRAMEWORK-BASED CLUSTERING VIA MULTIPLE UAVS IN DEADLINE-BASED WSN APPLICATIONS
16	IOT ENABLED UAV: NETWORK ARCHITECTURE AND ROUTING ALGORITHM

	IOT
1	EMS: AN ENERGY MANAGEMENT SCHEME FOR GREEN IOT ENVIRONMENTS
2	TOWARDS BETTER ROUTING PROTOCOLS FOR IOT
3	MEMETIC ALGORITHM BASED DATA GATHERING SCHEME FOR IOT-ENABLED WIRELESS SENSOR NETWORKS
4	A TIMELY VANET MULTI-HOP ROUTING METHOD IN IOT
5	ENHANCED LEACH PROTOCOL FOR INCREASING A LIFETIME OF WSNS
6	A TWO-LEVEL CLUSTERING BASED ON POSITION, DATA CORRELATION AND RESIDUAL ENERGY IN WSN
7	MOBILITY-AWARE HIERARCHICAL CLUSTERING IN MOBILE WIRELESS SENSOR NETWORKS
8	SENSITIVITY ANALYSIS OF AN ATTACK-PATTERN DISCOVERY BASED TRUSTED ROUTING SCHEME FOR MOBILE AD-HOC NETWORKS IN INDUSTRIAL IOT
9	SECRET SHARING-BASED ENERGY-AWARE AND MULTI-HOP ROUTING PROTOCOL FOR IOT BASED WSNS
10	RESIDUAL ENERGY BASED CLUSTER HEAD SELECTION IN WSN FOR IOT APPLICATIONS
11	DESIGN AND ANALYSIS OF PROBING ROUTE TO DEFENSE SINK-HOLE ATTACKS FOR INTERNET OF THINGS SECURITY

	UNDER WATER SENSOR NETWORKS (UWSN)
1	ENERGY-EFFICIENT DEPTH BASED PROBABILISTIC ROUTING WITHIN 2-HOP NEIGHBORHOOD FOR UNDERWATER SENSOR NETWORKS
2	A MULTI-LAYER CLUSTER BASED ENERGY EFFICIENT ROUTING SCHEME FOR UWSNS
3	RELIABLE PATH SELECTION AND OPPORTUNISTIC ROUTING PROTOCOL FOR UNDERWATER WIRELESS SENSOR NETWORKS
4	AN UNDERWATER LAYERED PROTOCOL BASED ON COOPERATIVE COMMUNICATION FOR UNDERWATER SENSOR NETWORK
5	E2MR: ENERGY-EFFICIENT MULTIPATH ROUTING PROTOCOL FOR UNDERWATER WIRELESS SENSOR NETWORKS
6	AN ENERGY-CONSERVING COLLISION-FREE MAC PROTOCOL FOR UNDERWATER SENSOR NETWORKS
7	A COLLISION-FREE GRAPH COLORING MAC PROTOCOL FOR UNDERWATER SENSOR NETWORKS
8	DATA COLLECTION IN UNDERWATER SENSOR NETWORKS BASED ON MOBILE EDGE COMPUTING

	VEHICULAR ADHOC NETWORK (VANET'S)
1	EVALUATION DSDV, AODV AND OLSR ROUTING PROTOCOLS IN REAL LIVE BY USING SUMO WITH NS3 SIMULATION IN VANET
2	RSU-ASSISTED TRAFFIC-AWARE ROUTING BASED ON REINFORCEMENT LEARNING FOR URBAN VANETS
3	EFFICIENT PRIVACY-PRESERVING SCHEME FOR LOCATION BASED SERVICES IN VANET SYSTEM
4	ENHANCEMENTS TO IEEE 802.15.4 MAC PROTOCOL TO SUPPORT VEHICLE-TO-ROADSIDE COMMUNICATIONS IN VANETS
5	A SECURE AND EFFICIENT GROUP KEY AGREEMENT SCHEME FOR VANET
6	SPEED-ADAPTIVE MULTI-COPY ROUTING FOR VEHICULAR DELAY TOLERANT NETWORKS
7	VEHICLE COLLISION AVOIDANCE IN A VANET ENVIRONMENT BY DATA COMMUNICATION
8	PERFORMANCE STUDY OF AODV PROTOCOL WITH ANT COLONY ALGORITHM IN VANETS

	WSN AND CLUSTERING
1	THE METHOD OF DATA COLLECTION BASED ON MULTIPLE MOBILE NODES FOR WIRELESS SENSOR NETWORK
2	IDENTIFICATION FAILURE DATA FOR CLUSTER HEADS AGGREGATION IN WSN BASED ON IMPROVING CLASSIFICATION OF SVM
3	LIFETIME MAXIMIZATION OF SENSOR NETWORKS THROUGH OPTIMAL DATA COLLECTION SCHEDULING OF MOBILE SINK
4	I-SEP AN IMPROVED ROUTING PROTOCOL FOR HETEROGENEOUS WSN FOR IOT BASED ENVIRONMENT MONITORING
5	MOBILE ROUTING ALGORITHM WITH DYNAMIC CLUSTERING FOR ENERGY LARGE-SCALE WIRELESSSENSOR NETWORKS

6	OPTIMAL CLUSTER HEAD SELECTION USING MODIFIED RIDER ASSISTED CLUSTERING FOR IOT
7	RCER: RELIABLE CLUSTER-BASED ENERGY-AWARE ROUTING PROTOCOL FOR HETEROGENEOUS WIRELESS SENSOR NETWORKS
8	AN ENERGY-EFFICIENT CLUSTERING ALGORITHM COMBINED GAME THEORY AND DUAL-CLUSTER-HEAD MECHANISM FOR WSNS
9	CER-CH: COMBINING ELECTION AND ROUTING AMONGST CLUSTER HEADS IN HETEROGENEOUS WSNS
10	ECH: AN ENHANCED CLUSTERING HIERARCHY APPROACH TO MAXIMIZE LIFETIME OFWIRELESS SENSOR NETWORKS
11	A HETEROGENEOUS NODES-BASED LOW ENERGY ADAPTIVE CLUSTERING HIERARCHY IN COGNITIVE RADIO SENSOR NETWORK
12	A CONGESTION-AWARE CLUSTERING AND ROUTING (CCR) PROTOCOL FOR MITIGATING CONGESTION IN WSN
13	QOS AWARE ROUTING PROTOCOL THROUGH CROSS-LAYER APPROACH IN ASYNCHRONOUS DUTY-CYCLED WSNS
14	AN ENERGY-EFFICIENT CROSS-LAYER-SENSING CLUSTERING METHOD BASED ON INTELLIGENT FOG COMPUTING IN WSNS
15	AN ENERGY-EFFICIENT REGION SOURCE ROUTING PROTOCOL FOR LIFETIME MAXIMIZATION IN WSN
16	EESRA: ENERGY EFFICIENT SCALABLE ROUTING ALGORITHM FOR WIRELESS SENSOR NETWORKS

	WSN ATTACKS
1	MITIGATION OF BLACK HOLE AND GRAY HOLE ATTACK USING SWARM INSPIRED ALGORITHM WITH ARTIFICIAL NEURAL NETWORK
2	A TIME INTERVAL BASED BLOCKCHAIN MODEL FOR DETECTION OF MALICIOUS NODES IN MANET USING NETWORK BLOCK MONITORING NODE
3	NETWORK-BASED ANOMALY INTRUSION DETECTION SYSTEM IN MANETS
4	AN ADAPTIVE APPROACH FOR DETECTING BLACKHOLE USING TCP ANALYSIS IN MANETS
5	SECURING BLACKHOLE ATTACKS IN MANETS USING MODIFIED SEQUENCE NUMBER IN AODV ROUTING PROTOCOL

PYTHON – ML, AI, NN, IP, DL, DS BASED PROJECT ABSTRACTS

COMPUTER VISION BASED FOOD RECOGNITION WITH NUTRITION ANALYSIS

ABSTRACT:-

Worldwide, in 2014, more than 1.9 billion adults, 18 years and older, were overweight. Of these, over 600 million were obese. Accurately documenting dietary caloric intake is crucial to manage weight loss, but also presents challenges because most of the current methods for dietary assessment must rely on memory to recall foods eaten. The important goal of this research work is to develop computer-vision based technical solutions to enhance and improve the accuracy of current measurements of dietary intake. The proposed system aims to improve the accuracy of dietary assessment by analyzing the food images captured by mobile devices (e.g., smartphone). The key technique innovation in the work is the deep learning-based food image recognition algorithms. Substantial research has demonstrated that digital imaging accurately estimates dietary intake in many environments and it has many advantages over other methods. However, how to derive the food information (e.g., food type and portion size) from food image effectively and efficiently remains a challenging and open research problem.

The proposed research work is planned to design and develop the new Convolutional Neural Network (CNN)-based food image recognition algorithm to address the food recognition problem. The proposed method will be applied to real-world food image data sets (UEC-256 and Food-101) and performance metrics will be explained.

STUDENT ATTENTIVE ANALYSIS USING COMPUTER VISION APPROACHES

ABSTRACT:-

Student behaviors in the class is analyzed using their facial expression, with the technologies of Computer Vision and Deep Learning. Facial recognition has been a challenge for many years. With the recent growth in machine learning, a real-time facial expression recognition system using deep learning technology can be useful for an emotion monitoring system for Human-computer interaction (HCI). We proposed a student behavioral detection system based on the facial Expression Moni-toring. We designed a custom Convolutional Neural Network model and used it to train and test different facial expression images with the Tensor Flow machine learning library. Methodology will have two parts, a recognizer for validation and a data training model for data training. The recognizer contains a facial detector and a facial expression recognizer. The facial detector extracts facial images from video frames and the facial expression recognizer distinguishes the extracted images. The data training model uses the Convolutional Neural Network to train data and the recognizer also uses Convolutional Neural Network to monitor the emotional state of a user through their facial expressions. The system recognizes the six universal emotions, angry, disgust, happy, surprise, sad and fear, along with neutral.

IMAGE SEGMENTATION FOR MR BRAIN TUMOR DETECTION USING MACHINE LEARNING: A REVIEW

Abstract:-

Brain tumor segmentation is an important task in medical image processing. Early diagnosis of brain tumors plays an important role in improving treatment possibilities and increases the survival rate of the patients. Manual segmentation of the brain tumors for cancer diagnosis, from large amount of MRI images generated in clinical routine, is a difficult and time consuming task. There is a need for automatic brain tumor image segmentation. The purpose of this paper is to provide a review of MRI-

based brain tumor segmentation methods. Recently, automatic segmentation using deep learning methods proved popular since these methods achieve the state-of-the-art results and can address this problem better than other methods. Deep learning methods can also enable efficient processing and objective evaluation of the large amounts of MRI-based image data. There are number of existing review papers, focusing on traditional methods for MRI-based brain tumor image segmentation

DETECTION OF STRESS IN IT EMPLOYEES USING MACHINE LEARNING TECHNIQUE

ABSTRACT:

The objective of this paper is to apply machine learning and visual processing to identify overworked IT employees. Our technology is an improved version of older stress detection systems that did not include live detection or personal counseling. Stress detection methods that don't include real-time monitoring or individual counselling are being updated in this research. A survey is used to collect data on employees' mental stress levels in order to provide effective stress management solutions. In order to get the most out of your employees, this paper will look at stress management and how to create a healthy, spontaneous work environment.

PREDICTION OF PARKINSON'S DISEASE USING XGBOOST

ABSTRACT:

Parkinson 's disease (PD) is one of the world's most serious public health issues. It is a well-known fact that approximately one million people in the United States suffer from Parkinson's disease, while the global number of persons suffering from Parkinson's disease is estimated to be around 5 million. It is a long term neurological condition that affects the dopamine producing nerve cells in the brain. Tremor, poor posture, and poor balance are common symptoms. It mostly affects people in their 60s and slows down their speech, causing them to talk softly and slurredly. Inappropriate silences between words and extended pauses before starting to speak characterize the patient's vocal pattern. In this paper we extend a work which used the motor symptoms and aims to predict Parkinson illness at an early stage using machine

learning techniques based on speech samples obtained from the UCI ML collection of Parkinson's patients. In this research, we evaluate the performance of classifiers that outperformed with high accuracy, such as decision trees with ensemble classifier models like XGBoost and Random Forest, utilizing with different machine learning models.

IDENTIFICATION OF FAKE INDIAN CURRENCY USING CONVOLUTIONAL NEURAL NETWORK

ABSTRACT:

The progression of shading printing innovation has expanded the rate of Fake currency copying notes on a large scale. Albeit electronic monetary exchanges are turning out to be more popular and the utilization of paper cash has been diminishing as of late, banknotes still remain in distribution attributable to their dependability and straight forwardness in use. Few years ago, the printing should be possible in a printing-houses, yet presently anybody can print a money paper with most extreme exactness utilizing a straightforward laser printer. As an outcome, the issue of duplicate currency rather than the authentic ones has been increases generally. India had reviled the problems like defilement and dark cash and fake of money notes is likewise a big issue to it. To handle this problem, a deep learning-based framework is proposed to identify the fake Indian currency. The outcome will classify whether the Indian currency note is Real or Fake.

DEEP ANALYSIS OF AUTISM SPECTRUM DISORDER DETECTION TECHNIQUES

ABSTRACT:

Autism also called as Autism spectrum disorder (ASD) is a complex, complicated and lifelong development disability which includes problem that are characterized by repetitive behavior, non-verbal communication, lack of concentration. In recent years, ASD is increasing at a higher momentum which needs early diagnosis. Detecting Autism through various Screening tool are very time consuming and costly. In last few year, various mathematical models also called as predictive analytics are widely used

for predictions. For medical science, Machine learning and pattern recognition are various multidisciplinary research areas which provide effective techniques to diagnose ASD. The main aim of this paper is to analyze various Machine learning algorithms, used by various researcher like SVM (support Vector Machine), Random forest Scan, decision trees, logistic regression and compare the result based on their accuracy and efficiency.

MALICIOUS URL DETECTION BASED ON MACHINE LEARNING

ABSTRACT:

Malicious URLs have become serious threats to cybersecurity, also forming incubators for Internet criminal activities. With visiting malicious URLs, visitors may undergo illegal actions such as spamming, phishing and drive-by downloads which seriously threat visitors' privacy and security that cause losses of billions of dollars every year. Traditional methods such as using URL blacklists to detect malicious URLs can classify most of the known URLs but are poorly effective when processing newly generated ones. To forestall greater economic losses, it is imperative to exert a method that can classify URLs in a timely manner. To improve timeliness of detecting malicious URLs, we use machine learning algorithms to automatically classify URLs. In this article, we selected the experiment results of several common machine learning models on our data set as the baseline and compared them horizontally with the outcome of random forest classifier. After that, we optimize the classifier to make the random forest classifier to achieve the best outcome within the lowest complexity.

FEATURE EXTRACTOR ANALYSIS FOR TRAFFIC CLEARANCE IN EMERGENCY FOR AMBULANCE AND FIRE ENGINES

ABSTRACT:-

Whenever we are thinking about any programmable devices then the embedded technology comes into force front. The embedded technology is now a day's very much popular and most of the products were developed with microcontroller or microprocessor based embedded technology. The accretion of traffic has led to the

use of more sophisticated Traffic management system in today's society. Traffic Congestion is a major factor which forestalls the smooth flow of Ambulance vehicles. To abate the inconvenience caused by the traffic, the Road Side Unit is used which minimizes the waiting time of vehicle and also manages traffic load. The connected vehicle technologies integrate wireless communications and computers into transportation systems, allowing wireless data exchanges between vehicles and road-side equipment, and enabling large-scale, sophisticated traffic measurement. Here the camera will be placed near traffic signal, it will detect the ambulance and fire engine emergency vehicle. As soon as the ambulance or fire engine vehicle arrives on road, the laptop camera using python scripts are used to check the vehicle and roads units are informed to free the respective road due to emergency. Here the ambulance or fire engine vehicle are detected using object detection machine learning technique, The python script is executed in laptop with image processing and uses the SIFT algorithms.

MUSIC GENRE CLASSIFICATION USING MACHINE LEARNING TECHNIQUES

ABSTRACT –

Categorizing music files according to their genre is a challenging task in the area of music information retrieval (MIR). In this study, we compare the performance of two classes of models. The first is a deep learning approach wherein a CNN model is trained end-to-end, to predict the genre label of an audio signal, solely using its spectrogram. The second approach utilizes hand-crafted features, both from the time domain and the frequency domain. We train four traditional machine learning classifiers with these features and compare their performance. The features that contribute the most towards this multi-class classification task are identified. The experiments are conducted on the Audio set data set and we report an AUC value of 0.894 for an ensemble classifier which combines the two proposed approaches.

PEST CLASSIFICATION AND DETECTION USING DEEP LEARNING

ABSTRACT:

India GDP (Gross Domestic Product) is mainly based on agricultural and high quality crop production plays a very important role. Frequent attacks of pests cause a serious damage to crops, by reducing their yields, and also decrease the nutrients in food products which pose a great threat to food. Safety. This in turn will have a major impact on our economy; farmers will suffer enormous losses due to these issues we have to sacrifice many farmers life. Regular monitoring of the crops is very important to take appropriate measures on pests on time by using appropriate pesticide and further protect the crops from damage. Pest detection would really help the farmers to avoid the early defilement of crops by using pesticide. Artificial intelligence plays an important role in solving huge problems in agriculture field thus farmers will benefit from AI-based technologies to boost agricultural production. In this paper we consider Mobile Net V2 algorithm to classify the pest to different classes by reshaping the image, extracting the features of pest classifying according to their respective classes. The result proves that Mobile Net V2 performs better with a higher accuracy (0.85) when compared to other pre-trained models.

LIP READING USING COMPUTER VISION AND DEEP LEARNING

ABSTRACT:

More than 13% of U.S. adults suffer from hearing loss. Some causes include exposure to loud noises, physical head injuries, and presbycusis. We propose using an autonomous speechreading algorithm to help the deaf or hard-of-hearing by translating visual lip movements in live-time into coherent sentences. We accomplish this by using a supervised ensemble deep learning model to classify lip movements into phonemes, then stitch phonemes back into words. Our dataset consists of images of segmented mouths that are each labeled with a phoneme. We process our images by first downsizing them to 64 by 64 pixels in order to speed up training time and reduce the memory needed. Afterward, we perform Gaussian Blurring to blur edges, reduce

contrast, and smooth sharp curves and also perform data augmentation to train the model to be less prone to overfitting. Our first computer vision model is a 1-D CNN (convolutional neural network) that imitates the famous VGG architecture. Next, we use a similar architecture for a 2-D CNN. We then perform ensemble learning, specifically using the voting technique. Our 1-D and 2-D CNN achieves a balanced accuracy of 31.7% and 17.3% respectively. Our ensemble techniques raise the balanced accuracy to 33.29%. We use the balanced accuracy as our metric due to using an unbalanced dataset. Human experts achieve only ~30 percent accuracy after years of training, which our models match after a few minutes of training.

ATTENDANCE MANAGEMENT SYSTEM USING HANDWRITTENCHARACTER RECOGNITION

ABSTRACT

Converting handwritten data into a digital form is a very tiresome, time consuming and inefficient task. It is challenging to store and access physical data with efficiency. Manual labor is required in order to maintain proper organization of the data. With the current developments in Artificial Intelligence (AI) techniques, it is now possible to convert handwritten text into a digital file with adequate amount of accuracy. Current research is for developing a model for converting Hand written attendance logs into a digital file with minimum human involvement as scanning the attendance sheet. The software is implemented in such a way that it will calculate the total attendance of each student, overall attendance percentage, and find out whether the student is a defaulter or not. This model is implemented using Google's TensorFlow platform and trained using Google'sdatasets from MNIST and with the dataset created by us. The model consists of layers of Convolution NeuralNetwork layers, fully connected layers, output layers and classifiers.

ANALYSIS OF FEATURE SELECTION TECHNIQUES FOR ANDROID MALWARE DETECTION

ABSTRACT –

Android mobile devices have reached a widespread use since the past decade, thus leading to an increase in the number and variety of applications on the market.

However, from the perspective of information security, the user control of sensitive information has been shadowed by the fast development and rich variety of the applications. In the recent state of the art, users are subject to responding numerous requests for permission about using their private data to be able run an application. The awareness of the user about data protection and its relationship to permission requests is crucial for protecting the user against malicious software. Nevertheless, the slow adaptation of users to novel technologies suggests the need for developing automatic tools for detecting malicious software

TRANSFER LEARNING-BASED OBJECT DETECTION BY USING CONVOLUTIONAL NEURAL NETWORKS

ABSTRACT:

Object detection has become an important task for various purposes in our daily lives. Machine learning techniques have been used for this task from earlier but they are used for the classification of image-based species to extract the feature set. This task of deciding the feature set helps to decide the desired object detection. To overcome the object classification problern, this paper proposes a transfer learning-based deep learning method. The different convolutional neural networks (CNN) are studied in this work. Here for the improvement in the result, the majority voting scheme is used. The overall work is carried out on the CUB 200-2011 dataset. The results obtained have shown incredible improvement in the accuracy of the proposed work when compared to the different CNN models.

DETECTION OF ALZHEIMER'S DISEASE AT EARLY STAGE USING MACHINE LEARNING

ABSTRACT –

Alzheimer's is the main reason for dementia that affects frequently older adults. This disease is costly especially, in terms of treatment. In addition, Alzheimer's is one of the deaths causes in the old-age citizens. Early Alzheimer's detection helps medical staffs in this disease diagnosis, which will certainly decrease the risk of death. This made the early Alzheimer's disease detection a crucial problem in the healthcare industry. The

objective of this research study is to introduce a computer-aided diagnosis system for Alzheimer's disease detection using machine learning techniques. We employed data from the Alzheimer's disease Neuroimaging Initiative (ADNI) and the Open Access Series of Imaging Studies (OASIS) brain datasets.

AUTOMATIC DETECTION OF DIABETIC RETINOPATHY: A REVIEW ON DATASETS, METHODS AND EVALUATION METRICS

ABSTRACT –

Diabetic retinopathy (DR) is a fast-spreading disease across the globe, which is caused by diabetes. The DR may lead the diabetic patients to complete vision loss. In this scenario, early identification of DR is more essential to recover the eyesight and provide help for timely treatment. The detection of DR can be manually performed by ophthalmologists and can also be done by an automated system. In the manual system, analysis and explanation of retinal fundus images need ophthalmologists, which is a time consuming and very expensive task, but in the automated system, artificial intelligence is used to perform an imperative role in the area of ophthalmology and especially in the early detection of diabetic retinopathy over the traditional detection approaches. Recently, numerous advanced studies related to the identification of DR have been reported. This paper presents a detailed review of the detection of DR with three major aspects; retinal datasets, DR detection methods, and performance evaluation metrics. Furthermore, this study also covers the author's observations and provides future directions in the field of diabetic retinopathy to overcome the research challenges for the research community.

Indian License Plate Recognition Using Convolutional Neural Networks (CNN)

ABSTRACT –

In the last few years, the deep learning technique in particular Convolutional Neural Networks (CNNs) is using massively in the field of computer vision and machine learning. This deep learning technique provides state - of-the-art accuracy in different classification, segmentation, and detection tasks on different benchmarks such as

MNIST, CIFAR-10, CIFAR-100, Microsoft COCO, and ImageNet. However, there are a lot of research has been conducted for Bangla License plate recognition with traditional machine learning approaches in last decade. None of them are used to deploy a physical system for Bangla License Plate Recognition System (BLPRS) due to their poor recognition accuracy. In this paper, we have implemented CNNs based Bangla license plate recognition system with better accuracy that can be applied for different purposes including roadside assistance, automatic parking lot management system, vehicle license status detection and so on. Along with that, we have also created and released a very first and standard database for BLPRS

HANDWRITTEN CHARACTER RECOGNITION USING CNN

ABSTRACT –

Many localized languages struggle to reap the benefits of recent advancements in character recognition systems due to the lack of substantial amount of labeled training data. This is due to the difficulty in generating large amounts of labeled data for such languages and inability of deep learning techniques to properly learn from small number of training samples. We solve this problem by introducing a technique of generating new training samples from the existing samples, with realistic augmentations which reflect actual variations that are present in human hand writing, by adding random controlled noise to their corresponding instantiation parameters. Our results with a mere 200 training samples per class surpass existing character recognition results in the EMNIST-letter dataset while achieving the existing results in the three datasets: EMNIST-balanced, EMNIST-digits, and MNIST. We also develop a strategy to effectively use a combination of loss functions to improve reconstructions. Our system is useful in character recognition for localized languages that lack much labeled training data and even in other related more general contexts such as object recognition.

REAL-TIME VEHICLE MAKE AND MODEL RECOGNITION SYSTEM

ABSTRACT –

A Vehicle Make and Model Recognition (VMMR) system can provide great value in terms of vehicle monitoring and identification based on vehicle appearance in addition to the vehicles' attached license plate typical recognition. A real-time VMMR system is an important component of many applications such as automatic vehicle surveillance, traffic management, driver assistance systems, traffic behavior analysis, and traffic monitoring, etc. A VMMR system has a unique set of challenges and issues. Few of the challenges are image acquisition, variations in illuminations and weather, occlusions, shadows, reflections, large variety of vehicles, inter-class and intra-class similarities, addition/deletion of vehicles' models over time, etc. In this work, we present a unique and robust real-time VMMR system which can handle the challenges described above and recognize vehicles with high accuracy. We extract image features from vehicle images and create feature vectors to represent the dataset. We use two classification algorithms, Random Forest (RF) and Support Vector Machine (SVM), in our work. We use a realistic dataset to test and evaluate the proposed VMMR system. The vehicles' images in the dataset reflect real-world situations. The proposed VMMR system recognizes vehicles on the basis of make, model, and generation (manufacturing years) while the existing VMMR systems can only identify the make and model. Comparison with existing VMMR research demonstrates superior performance of the proposed system in terms of recognition accuracy and processing speed

VOICE BASED GENDER CLASSIFICATION USING MACHINE LEARNING ALGORITHM

ABSTRACT –

Gender identification is one of the major problem speech analysis today. Tracing the gender from acoustic data i.e., pitch, median, frequency etc. Machine learning gives

promising results for classification problem in all the research domains. There are several performance metrics to evaluate algorithms of an area. Our Comparative model algorithm for evaluating 5 different machine learning algorithms based on eight different metrics in gender classification from acoustic data. Agenda is to identify gender, with five different algorithms: Linear Discriminant Analysis (LDA), K-Nearest Neighbour (KNN), Classification and Regression Trees (CART), Random Forest (RF), and Support Vector Machine (SVM) on basis of eight different metrics. The main parameter in evaluating any algorithms is its performance. Misclassification rate must be less in classification problems, which says that the accuracy rate must be high. Location and gender of the person have become very crucial in economic markets in the form of AdSense. Here with this comparative model algorithm, we are trying to assess the different ML algorithms and find the best fit for gender classification of acoustic data.

ANALYSIS OF ARRHYTHMIA CLASSIFICATION ON ECG DATASET

ABSTRACT –

In this project, Recurrent Neural Networks (RNN) have been applied for classifying the normal and abnormal beats in an ECG. The primary aim of this paper was to enable automatic separation of regular and irregular beats. The MITBIH Arrhythmia database is being used to classify the beat classification performance. The methodology used is carried out using huge volume of standard data i.e. ECG time-series data as inputs to Long Short Term Memory Network . We divided the dataset as training and testing sub-data. The effectiveness, accuracy and capabilities of our methodology ECG arrhythmia detection is demonstrated and quantitative comparisons with different RNN models have also been carried out. pretty much since the opening of first supermarket.

ACCIDENT SEVERITY DETECTION AND PREDICTION USING MACHINE LEARNING TECHNIQUES

ABSTRACT -

Despite all that has been done to promote Road Safety in India so far, there are always regions that fall prey to the vulnerabilities that linger on in every corner. The heterogeneity of these vulnerability-inducing causes leads to the need for an effective analysis so as to subdue the alarming figures by a significant amount. The traffic has been transformed into the difficult structure in points of designing and managing by the reason of increasing number of vehicles. This situation has discovered road accidents problem, influenced public health and country economy and done the studies on solution of the problem. Large calibrated data agglomerations have increased by the reasons of the technological improvements and data storage with low cost. Arising the need of accession to information from this large calibrated data obtained the corner stone of the data mining. This work analyzes the road accidents in India data using the most compatible machine learning classification techniques for road accidents estimation by data mining has been intended.

A NEW APPROACH TO DETECT ANOMALOUS BEHAVIOUR IN ATMS

ABSTRACT –

An automated teller machine is an electronics telecommunications device which is utilized by people, mostly to withdraw money. In the present scenario, a fair amount of the population using an ATM machine to withdraw cash are facing a problem of robberies and theft due to lack of security guards. Surveillance cameras being used in the ATM cells, however monitoring capabilities of law enforcement agencies has not kept pace. So, in this system anomalous behavior is detected using CNN and LSTM on the surveillance videos. Accurate recognition of anomalous behavior at a point in time is the most challenging problem for systems. The anomaly as well as non-anomaly dataset is fed to a machine and trained to identify abnormal behavior.

Rice Blast Disease Recognition Using a Deep Convolutional Neural Network

ABSTRACT –

Rice disease recognition is crucial in automated rice disease diagnosis systems. At present, deep convolutional neural network (CNN) is generally considered the state-of-the-art solution in image recognition. In this paper, we propose a novel rice blast recognition method based on CNN. A dataset of 2906 positive samples and 2902 negative samples is established for training and testing the CNN model. In addition, we conduct comparative experiments for qualitative and quantitatively analysis in our evaluation of the effectiveness of the proposed method. The evaluation results show that the high-level features extracted by CNN are more discriminative and effective than traditional hand-crafted features including local binary patterns histograms (LBPH) and Haar-WT (Wavelet Transform). Moreover, quantitative evaluation results indicate that CNN with Softmax and CNN with support vector machine
SVM) have similar performances, with higher accuracy, larger area under curve (AUC), and better receiver operating characteristic (ROC) curves than both LBPH plus an SVM as the classifier and Haar-WT plus an SVM as the classifier. Therefore, our CNN model is a top performing method for rice blast disease recognition and can be potentially employed in practical applications.

A NOVEL METHOD FOR IMPROVING AIR POLLUTION PREDICTION BASED ON MACHINE LEARNING APPROACHES

ABSTRACT –

Environmental pollution has mainly been attributed to urbanization and industrial developments across the globe. Air pollution has been marked as one of the major problems of metropolitan areas around the world, especially in Tehran, the capital of

Iran, where its administrators and residents have long been struggling with air pollution damage such as the health issues of its citizens. As far as the study area of this research is concerned, a considerable proportion of Tehran air pollution is attributed to PM10 and PM2.5 pollutants. Therefore, the present study was conducted to determine the prediction models to determine air pollutions based on PM10 and PM2.5 pollution concentrations in Tehran. To predict the air-pollution, the data related to day of week, month of year, topography, meteorology, and pollutant rate of two nearest neighbors as the input parameters and machine learning methods were used. These methods include a regression support vector machine, geographically weighted regression, artificial neural network and auto-regressive nonlinear neural network with an external input as the machine learning method for the air pollution prediction. A prediction model was then proposed to improve the afore-mentioned methods, by which the error percentage has been reduced and improved by 57%, 47%, 47% and 94%, respectively. The most reliable algorithm for the prediction of air pollution was autoregressive nonlinear neural network with external input using the proposed prediction model, where its one-day prediction error reached 1.79 μg/m3 . Finally, using genetic algorithm, data for day of week, month of year, topography, wind direction, maximum temperature and pollutant rate of the two nearest neighbors were identified as the most effective parameters in the prediction of air pollution.

SMART REAL-TIME VIDEO SURVEILLANCE PLATFORM FOR DROWSINESS DETECTION BASED ON EYELID CLOSURE

ABSTRACT –

We propose drowsiness detection in real-time surveillance videos by determining if a person's eyes are open or closed. As a first step, the face of the subject is detected in the image. In the detected face, the eyes are localized and filtered with an extended Sobel operator to detect the curvature of the eyelids. Once the curves are detected, concavity is used to tell whether the eyelids are closed or open. Consequently, a concave upward curve means the eyelid is closed whereas a concave downwards

curve means the eye is open. The proposed method is also implemented on hardware in order to be used in real-time scenarios, such as driver drowsiness detection. The evaluation of the proposed method used three image datasets, where images in the first dataset have a uniform background. The proposed method achieved classification accuracy of up to 95% on this dataset. Another benchmark dataset used has significant variations based on face deformations. With this dataset, our method achieved classification accuracy of 70%. A real-time video dataset of people driving the car was also used, where the proposed method achieved 95% accuracy, thus showing its feasibility for use in real-time scenarios.

DEEP ANOMALY DETECTION FOR GENERALIZED FACE ANTI-SPOOFING

ABSTRACT –

Face recognition has achieved unprecedented results, surpassing human capabilities in certain scenarios. However, these automatic solutions are not ready for production because they can be easily fooled by simple identity impersonation attacks. And although much effort has been devoted to develop face anti-spoofing models, their generalization capacity still remains a challenge in real scenarios. In this paper, we introduce a novel approach that reformulates the Generalized Presentation Attack Detection (GPAD) problem from an anomaly detection perspective. Technically, a deep metric learning model is proposed, where a triplet focal loss is used as a regularization for a novel loss coined "metric-softmax", which is in charge of guiding the learning process towards more discriminative feature representations in an embedding space. Finally, we demonstrate the benefits of our deep anomaly detection architecture, by introducing a few-shot a posteriori probability estimation that does not need any classifier to be trained on the learned features. We conduct extensive experiments using the GRAD-GPAD framework that provides the largest aggregated dataset for face GPAD. Results confirm that our approach is able to outperform all the state-of-the-art methods by a considerable margin.

ANALYTICAL STUDY FOR PRICE PREDICTION OF BITCOIN USING MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE

ABSTRACT –

Bitcoin, a type of cryptocurrency is currently a thriving open-source community and payment network, which is currently used by millions of people. As the value of Bitcoin varies everyday, it would be very interesting for investors to forecast the Bitcoin value but at the same time making it difficult to predict. Bitcoin is a cryptocurrency technology that has attracted investors because of its big price increases. This has led to researchers applying various methods to predict Bitcoin prices such as Support Vector Machines, Multilayer Perceptron, RNN etc. To obtain accuracy and efficiency as compared to these algorithms this research paper tends to exhibit the use of RNN using LSTM model to predict the price of crypto currency. The results were computed by extrapolating graphs along with the Root Mean Square Error of the model which was found to be 3.38.

AUTOMATED BIRD SPECIES IDENTIFICATION USING AUDIO SIGNAL PROCESSING AND NEURAL NETWORK

ABSTRACT-

Now a days bird population is changing drastically because lots of reasons such as human intervention, climate change, global warming, forest fires or deforestation, etc., With the help of automatic bird species detection using machine learning algorithms, it is now possible to keep a watch on the population of birds as well as their behavior. Because manual identification of different bird species takes a lot of time and effort, an automatic bird identification

system that does not require physical intervention is developed in this work. To achieve this objective, Convolutional Neural Network is used as compared to traditionally used classifiers such as SVM, Random Forest, SMACPY. The foremost goal

is to identify the bird species using the dataset including vocals of the different birds. The input dataset will be pre-processed, which will comprise framing, silence removal, reconstruction, and then a spectrogram will be constructed, which will be sent to a convolutional neural network as an input, followed by CNN modification, testing, and classification. The result is compared with pre-trained data and output is generated and birds are classified according to their features (size, colour, species, etc.)

CROP YIELD PREDICTION AND EFFICIENT USE OF FERTILIZERS

ABSTRACT –

India being an agriculture country, its economy predominantly depends on agriculture yield growth and agroindustry products. Data Mining is an emerging research field in crop yield analysis. Yield prediction is a very important issue in agricultural. Any farmer is interested in knowing how much yield he is about to expect. Analyze the various related attributes like location, pH value from which alkalinity of the soil is determined. Along with it, percentage of nutrients like Nitrogen (N), Phosphorous (P), and Potassium (K) Location is used along with the use of third-party applications like APIs for weather and temperature, type of soil, nutrient value of the soil in that region, amount of rainfall in the region, soil composition can be determined. All these attributes of data will be analyzed train the data with various suitable machine learning algorithms for creating a model. The system comes with a model to be precise and accurate in predicting crop yield and deliver the end user with proper recommendations about required fertilizer ratio based on atmospheric and soil parameters of the land, which enhance to increase the crop yield and increase farmer revenue.

ELECTRICITY THEFT DETECTION IN SMART GRIDS BASED ON DEEP NEURAL NETWORK

ABSTRACT:

Electricity theft is a global problem that negatively affects both utility companies and electricity users. It destabilizes the economic development of utility companies,

causes electric hazards and impacts the high cost of energy for users. The development of smart grids plays an important role in electricity theft detection since they generate massive data that includes customer consumption data which, through machine learning and deep learning techniques, can be utilized to detect electricity theft. This paper introduces the theft detection method which uses comprehensive features in time and frequency domains in a deep neural network-based classification approach. We address dataset weaknesses such as missing data and class imbalance problems through data interpolation and synthetic data generation processes. We analyze and compare the contribution of features from both time and frequency domains, run experiments in combined and reduced feature space using principal component analysis

and finally incorporate minimum redundancy maximum relevance scheme for validating the most important features. We improve the electricity theft detection performance by optimizing hyperparameters using a Bayesian optimizer and we employ an adaptive moment estimation optimizer to carry out experiments using different values of key parameters to determine the optimal settings that achieve the best accuracy. Lastly, we show the competitiveness of our method in comparison with other methods evaluated on the same dataset. On validation, we obtained 97% area under the curve (AUC), which is 1% higher than the best AUC in existing works, and 91.8% accuracy, which is the second-best on the benchmark.

CRIME AGAINST WOMEN ANALYSIS & PREDICTION IN INDIA USING SUPERVISED REGRESSION

ABSTRACT:

Women's safety and protection is must important but crime happens against women is common and serious issue. Problem of rising crimes that happens with women like rape & gang-rape cases, sexual harassment with women, cruelty by her husband or family, dowry death cases, acid attack on women and many more are increasing day

by day. That is critical issue in not only in India but also various countries. The huge amount of data collection is generated based on crime reporting. This data can be very useful for appraise and predict crime and can help us to some degree to stop the crime. Data analysis is a process of examining, cleansing, transforming, and modelling data to establish useful information, reporting conclusions, and sustaining decision- making. This research shows a contextual investigation of the women's crime examination in India using supervised learning. Information was pre-prepared to eliminate the anomalies, fix invalid locations, and ascertain the longitudes and scopes. The expressive investigation is created for dissect the women's crime per crime type and district and create heat maps for the crime dispersion. The outcomes help decision-makers with important experiences into women's crime forecast and avoidance. Application of this For Find the spatial criminal hotspot using a set of analysis and identify the crimes.

DETECTION OF CYBERBULLYING USING MACHINE LEARNING AND DEEP LEARNING ALGORITHMS

ABSTRACT:

Use of digital technologies lead to the development of cyberbullying and social media has become a major source for it compared to mobile phones, platforms such as gaming and messaging. Cyberbullying can take several forms that includes sexual remarks, threats, hate mails and posting false things about someone which can be seen and read by millions of people. Compared to traditional bullying, cyberbullying has a longer lasting effect on the victim which can affect them physically or emotionally or mentally or in all the forms. Number of suicides due to cyberbullying has increased in recent years and India is one among the four countries that has more number of cases in cyberbullying. Prevention of cyberbullying has become mandatory in universities and schools due to rising cases since 2015. This paper aims to detect cyberbullying comments automatically using Machine learning and Deep

learning techniques. Metrics such as accuracy, precision, recall and F1-score used to evaluate the model performance. It is found that Gated Recurrent Unit, a deep learning technique outperformed all the other techniques which are considered in this paper with an accuracy of 95.47%.

DRUG RECOMMENDATION SYSTEM BASED ON SENTIMENT ANALYSIS OF DRUG REVIEWS USING MACHINE LEARNING

ABSTRACT:

Since coronavirus has shown up, inaccessibility of legitimate clinical resources is at its peak, like the shortage of specialists and healthcare workers, lack of proper equipment and medicines etc. The entire medical fraternity is in distress, which results in numerous individual's demise. Due to unavailability, individuals started taking medication independently without appropriate consultation, making the health condition worse than usual. As of late, machine learning has been valuable in numerous applications, and there is an increase in innovative work for automation. This paper intends to present a drug recommender system that can drastically reduce specialists heap. In this research, we build a medicine recommendation system that uses patient reviews to predict the sentiment using various vectorization processes like Bow, TF-IDF,Word2Vec, and Manual Feature Analysis, which can help recommend the top drug for a given disease by different classification algorithms. The predicted sentiments were evaluated by precision, recall, f1score, accuracy, and AUC score. The results show that classifier LinearSVC using TF-IDF vectorization outperforms all other models with 93% accuracy.

PREDICTIVE ANALYSIS FOR BIG MART SALES USING MACHINE LEARNING ALGORITHMS

ABSTRACT:

Currently, supermarket run-centres, Big Marts keep track of each individual item's sales data in order to anticipate potential consumer demand and update inventory

management. Anomalies and general trends are often discovered by mining the data warehouse's data store. For retailers like Big Mart, the resulting data can be used to forecast future sales volume using various machine learning techniques like big mart. A predictive model was developed using Xgboost, Linear regression, Polynomial regression, and Ridge regression techniques for forecasting the sales of a business such as Big -Mart, and it was discovered that the model outperforms existing models.

DEEP LEARNING BASED FUSION APPROACH FOR HATE SPEECH DETECTION

In recent years, the increasing prevalence of hate speech in social media has been considered as a serious problem worldwide. Many governments and organizations have made significant investment in hate speech detection techniques, which have also attracted the attention of the scientific community. Although plenty of literature focusing on this issue is available, it remains difficult to assess the performances of each proposed method, as each has its own advantages and disadvantages. A general way to improve the overall results of classification by fusing the various classifiers results is a meaningful attempt. We first focus on several famous machine learning methods for text classification such as Embeddings from Language Models (ELMo), Bidirectional Encoder Representation from Transformers (BERT) and Convolutional Neural Network (CNN), and apply these methods to the data sets of theSemEval 2019 Task 5. We then adopt some fusion strategies to combine the classifiers to improve the overall classification performance. The results show that the accuracy and F1-score of the classification are significantly improved.

EARLY DETECTION OF BRAIN STROKE USING MACHINE LEARNING TECHNIQUES

ABSTRACT:

The brain is the most complex organ in the human body. Brain Stroke is a long-term disability disease that occurs all over the world and is the leading cause of death. A stroke occurs when the brain's blood supply is cut off and it ceases to function. There

are two primary causes of brain stroke: a blocked conduit (ischemic stroke) or blood vessel spilling or blasting (hemorrhagic stroke). Early brain stroke prediction yields a higher amount that is profitable for the initiating time. Brain stroke is caused primarily by people's lifestyle decisions, particularly in the current scenario by evolving elements such as high blood sugar, heart disease, obesity, diabetes, and hypertension. This research study has used various machine learning (ML) algorithms like K nearest neighbour, logistic regression, random forest (RF) classifier and SVC. This research work designs a model using one among the following algorithms with high accuracy to predict the stroke for newly given inputs.

NOVEL XGBOOST TUNED MACHINE LEARNING MODEL FOR SOFTWARE BUG PREDICTION

ABSTRACT:

As internet users grow, the quantity of data available on the web increases with it. Virtually everything that needs human effort or human presence can be replaced by the Software. While developing an application it follows the Software Development Lifecycle (SDLC). Within the early stages of development, it's a compulsory task to take care of system or bugs to avoid wasting time and effort during initial development phase to forestall any runtime crisis. In this paper, we used the machine learning models - Logistic regression, Decision Tree, Random Forest, Adaboost and XGBoost as state-of-art models for four datasets of NASA-KC2, PC3, JM1, CM1. Later on, new model was proposed based on tuning the existing XGBoost model by changing its parameter namely N_estimator, learning rate, max depth, and subsample. The results achieved were compared with state-of-art models and our model outperformed them for all datasets. The authors believe that this research will contribute in correctly detecting the bugs with machine learning approach.

TRAFFIC PREDICTION FOR INTELLIGENT TRANSPORTATION SYSTEM USING MACHINE LEARNING

ABSTRACT:

This paper aims to develop a tool for predicting accurate and timely traffic flow Information. Traffic Environment involves everything that can affect the traffic flowing on the road, whether it's traffic signals, accidents, rallies, even repairing of roads that can cause a jam. If we have prior information which is very near approximate about all the above and many more daily life situations which can affect traffic then, a driver or rider can make an informed decision. Also, it helps in the future of autonomous vehicles. In the current decades, traffic data have been generating exponentially, and we have moved towards the big data concepts for transportation. Available prediction methods for traffic flow use some traffic prediction models and are still unsatisfactory to handle real-world applications. This fact inspired us to work on the traffic flow forecast problem build on the traffic data and models.It is cumbersome to forecast the traffic flow accurately because the data available for the transportation system is insanely huge. In this work, we planned to use machine learning, genetic, soft computing, and deep learning algorithms to analyses the big-data for the transportation system with much-reduced complexity. Also, Image Processing algorithms are involved in traffic sign recognition, which eventually helps for the right training of autonomous vehicles.

PROBABILISTIC INFERENCE AND TRUSTWORTHINESS EVALUATION OF ASSOCIATIVE LINKS TOWARD MALICIOUS ATTACK DETECTION FOR ONLINE RECOMMENDATIONS

ABSTRACT:

The increasing use of recommender systems as personalization recommendation services such as Amazon, TripAdvisor, and Yelp, has stressed the demand for secure and usable abnormality detection techniques, due to fundamental vulnerabilities of recommender systems and their openness. With the emergence of new attacks, how

to defend diverse malicious attacks for online recommendations is a challenging issue. Moreover, characterizing and evaluating sparse rating behaviors are a long-standing problem that still remains open, leading to an upsurge of research, as well as real application. This article investigates probabilistic inference and trustworthiness evaluation of behavioral links according to coupled association networks converted from rating behaviors, and presents a unified detection framework from a novel perspective to spot diverse malicious threats. First, an association graph is constructed from the original rating matrix based on both the inherent rating motivation of users and atomic propagation rules of coupled networks. Then, we evaluate the trustworthiness of link behaviors in the targeted network of coupled association network by exploiting a factor graph model of coupled network, and re determine concerned links in the targeted network. Finally, suspicious users and items can be empirically inferred by comprehensively evaluating the trustworthiness of both links and nodes in the targeted network. Extensive experiments on synthetic data for profile injection attacks and co-visitation injection attacks, as well as real-world data including Amazon and TripAdvisor, demonstrate the effectiveness of the proposed detection approach compared with competing benchmarks.

FRAUD DETECTION AND ANALYSIS FOR INSURANCE CLAIM USING MACHINE LEARNING

ABSTRACT:

Insurance Company working as commercial enterprise from last few years have been experiencing fraud cases for all type of claims. Amount claimed by fraudulent is significantly huge that may causes serious problems, hence along with government, different organization also working to detect and reduce such activities. Such frauds occurred in all areas of insurance claim with high severity such as insurance claimed towards auto sector is fraud that widely claimed and prominent type, which can be done by fake accident claim. So, we aim to develop a project that work on insurance

claim data set to detect fraud and fake claims amount. The project implement machine learning algorithms to build model to label and classify claim. Also, to study comparative study of all machine learning

algorithms used for classification using confusion matrix in term soft accuracy, precision, recall etc. For fraudulent transaction validation, machine learning model is built using PySpark Python Library.

A TWO-FOLD MACHINE LEARNING APPROACH TO PREVENT AND DETECT IOT BOTNET ATTACKS

ABSTRACT:

The botnet attack is a multi-stage and the most prevalent cyber-attack in the Internet of Things (IoT) environment that initiates with scanning activity and ends at the distributed denial of service (DDoS) attack. The existing studies mostly focus on detecting botnet attacks after the IoT devices get compromised, and start performing the DDoS attack. Similarly, the performance of most of the existing machine learning based botnet detection models is limited to a specific dataset on which they are trained. As a consequence, these solutions do not perform well on other datasets due to the diversity of attack patterns. Therefore, in this work, we first produce a generic scanning and DDoS attack dataset by generating 33 types of scan and 60 types of DDoS attacks. In addition, we partially integrated the scan and DDoS attack samples from three publicly-available datasets for maximum attack coverage to better train the machine learning algorithms. Afterwards, we propose a two-fold machine learning approach to prevent and detect IoT botnet attacks. In the first fold, we trained a state-of-the-art deep learning model, i.e., ResNet-18 to detect the scanning activity in the premature attack stage to prevent IoT botnet attacks. While, in the second fold, we trained another ResNet-18 model for DDoS attack identification to detect IoT botnet attacks. Overall, the proposed two-fold approach manifests 98.89% accuracy, 99.01% precision, 98.74% recall, and 98.87% f1-score to prevent and detect IoT botnet attacks.

To demonstrate the effectiveness of the proposed two-fold approach, we trained three other ResNet-18 models over three different datasets for detecting scan and DDoS attacks and compared their performance with the proposed two-fold approach. The experimental results prove that the proposed two-fold approach can efficiently prevent and detect botnet attacks as compared to other trained models.

PLANT DISEASE DIAGNOSIS USING CNN

ABSTRACT:

Deep learning with convolutional neural networks (CNNs) has achieved great success in the classification of various plant diseases. However, a limited number of studies have elucidated the process of inference, leaving it as an untouchable *black box*. Revealing the CNN to extract the learned feature as an interpretable form not only ensures its reliability but also enables the validation of the model authenticity and the training dataset by human intervention. In this study, a variety of neuron-wise and layer-wise visualization methods were applied using a CNN, trained with a publicly available plant disease image dataset. We showed that neural networks can capture the colors and textures of lesions specific to respective diseases upon diagnosis, which resembles human decision-making. While several visualization methods were used as they are, others had to be optimized to target a specific layer that fully captures the features to generate consequential outputs. Moreover, by interpreting the generated attention maps, we identified several layers that were not contributing to inference and removed such layers inside the network, decreasing the number of parameters by 75% without affecting the classification accuracy. The results provide an impetus for the CNN *black box* users in the field of plant science to better understand the diagnosis process and lead to further efficient use of deep learning for plant disease diagnosis.

ANALYSIS OF CHRONIC KIDNEY DISEASE DATASET BY APPLYING MACHINE LEARNING METHODS

ABSTRACT –

Currently, there are many people in the world suffering from chronic kidney diseases worldwide. Due to the several risk factors like food, environment and living standards many people get diseases suddenly without understanding of their condition. Diagnosing of chronic kidney diseases is generally invasive, costly, time-consuming and often risky. That is why many patients reach late stages of it without treatment, especially in those countries where the resources are limited. Therefore, the early detection strategy of the disease remains important, particularly in developing countries, where the diseases are generally diagnosed in late stages. Finding a solution for above-mentioned problems and riding out from disadvantages became a strong motive to conduct this study. In this research study, the effects of using clinical features

AI-POWERED BANANA DISEASES AND PEST DETECTION

ABSTRACT –

Banana (*Musa* spp.) is the most popular marketable fruit crop grown all over the world, and a dominant staple food in many developing countries. Worldwide, banana production is affected by numerous diseases and pests. Novel and rapid methods for the timely detection of pests and diseases will allow to surveil and develop control measures with greater efficiency. As deep convolutional neural networks (DCNN) and transfer learning has been successfully applied in various fields, it has freshly moved in the domain of just-in-time crop disease detection. The aim of this research is to develop an AI-based banana disease and pest detection system using a DCNN to support banana farmers.

HAND GESTURE RECOGNITION WITH CONVOLUTION NEURAL NETWORKS

ABSTRACT - Hand gestures are the most common forms of communication and have great importance in our world. They can help in building safe and comfortable user interfaces for a multitude of applications. Various computer vision algorithms have employed color and depth camera for hand gesture recognition, but robust classification of gestures from different subjects is still challenging. I propose an algorithm for real-time hand gesture recognition using convolutional neural networks (CNNs). The proposed CNN achieves an average accuracy of 98.76% on the dataset comprising of 9 hand gestures and 500 images for each gesture

A CNN-BASED FRAMEWORK FOR COMPARISON OF CONTACTLESS TO CONTACT-BASED FINGERPRINTS

ABSTRACT –

Accurate comparison of contactless 2-D fingerprint images with contact-based fingerprints is critical for the success of emerging contactless 2-D fingerprint technologies, which offer more hygienic and deformation-free acquisition of fingerprint features. Convolutional neural networks (CNNs) have shown remarkable capabilities inbiometrics recognition. However, there has been almost nil attempt to match fingerprint images using CNN-based approaches. This paper develops a CNN-based framework to accurately match contactless and contact-based fingerprint images. Our framework first trains a multi-Siamese CNN using fingerprint minutiae, respective ridge map and specific region of ridge map. This network is used to generate deep fingerprint representation using a distance-aware loss function. Deep fingerprint representations generated in such multi-Siamese network are concatenated for more accurate cross comparison. The proposed approach for cross-fingerprint comparison is evaluated on two publicly available databases containing contactless 2-D fingerprints and respective contact-based fingerprints. Our experiments presented in this paper consistently achieve outperforming results over several popular deep learning

architectures and over contactless to contact-based fingerprints comparison methods in the literature

BUILDING AN INTRUSION DETECTION SYSTEM USING A FILTER-BASED FEATURE SELECTION ALGORITHM

ABSTRACT-

Redundant and irrelevant features in data have caused a long-term problem in network traffic classification. These features not only slow down the process of classification but also prevent a classifier from making accurate decisions, especially when coping with big data. In this paper, we propose a mutual information based algorithm that analytically selects the optimal feature for classification. This mutual information based feature selection algorithm can handle linearly and nonlinearly dependent data features. Its effectiveness is evaluated in the cases of network intrusion detection.

DEEPIRIS: IRIS RECOGNITION USING A DEEP LEARNING APPROACH

ABSTRACT

Iris recognition has been an active research area during last few decades, because of its wide applications in security, from airports to homeland security border control. Different features and algorithms have been proposed for iris recognition in the past. In this paper, we propose an end-to-end deep learning framework for iris recognition based on residual convolutional neural network (CNN), which can jointly learn the feature representation and perform recognition. We train our model on a well-known iris recognition dataset using only a few training images from each class, and show promising results and improvements over previous approaches. We also present a visualization technique which is able to detect the important areas in iris images which can mostly impact the recognition results. We believe this framework can be widely

used for other biometrics recognition tasks, helping to have a more scalable and accurate systems.

DEEP CONVOLUTIONAL NEURAL NETWORKS FOR LUNG CANCER DETECTION

ABSTRACT –

Here we demonstrate a CAD system for lung cancer classification of CT scans with unmarked nodules, a dataset from the Kaggle Data Science Bowl 2017. Thresholdingwas used as an initial segmentation approach to to segment out lung tissue from the rest of the CT scan. Thresholding produced the next best lung segmentation. The initial approach was to directly feed in the segmented CT scans into 3D CNNs for classification, but this proved to be in- adequate. Instead, a modified U-Net trained on LUNA16 data (CT scans with labelled nodules) was used to firstdetect nodule candidates in the Kaggle CT scans. The U-Net nodule detection produced many false positives, so regions of CTs with segmented lungs where the most likely nodule candidates were located as determined by the U-Net out-put were fed into 3D Convolutional Neural Networks (a vanilla 3D CNN and a Google net-based 3D CNN) to ultimately classify the CT scan as positive or negative for lung cancer. The vanilla 3D CNN produced a test set AUC of???and the Google net-based 3D CNN produced a test set AUC of ???. While performance of our CAD system is not state-of-the-art, current CAD systems in literature have several training and testing phases that each requires a lot of labelled data, while our CAD system has only three major phases (segmentation, nodule candidate detection, and malignancy classification), allowing more efficient training and detection and more generalizability to other cancers.

HOTEL RECOMMENDATION SYSTEM BASED ON HYBRID RECOMMENDATION MODEL

ABSTRACT –

we presented Machine Learning, Sentiment Word Net based method for opinion mining from hotel reviews, and sentence relevance score based method for opinion

summarization of hotel reviews. The classified and summarized hotel review information helps web users to understand review contents easily in a short time. Opinion Mining for Hotel Review system that detects hidden sentiments in feedback of the customer and rates the feedback accordingly. The system uses opinion-mining methodology in order to achieve desired functionality. Opinion mining for hotel reviews is a web application, which gives review of the feedback that is posted by various users. The system takes review of various users, based on the opinion, system will specify whether the posted hotel is good, bad, or worst. Based on users search on hotels, recommendations will be shown to the user based on how many times a user visited that particular hotel page. We use a database of sentiment based keywords along with positivity or negativity weight in database and then based on these sentiment keywords mined in user review is ranked. Once the user login to the system he views the hotels and gives review about the hotel. System will use database and will match the review with the keywords in database and rank the review accordingly. System will rate the hotel based on the rank of review. The role of the admin is to post new hotel and add keywords in database. This application is useful for those who are exploring new places and also useful for those who travel often. Using this application, a user will get to know which hotel is best and suitable for them. User can decide which hotel to accommodate before they reach the place.

KANNADA HANDWRITTEN DOCUMENT RECOGNITION USING CONVOLUTIONAL NEURAL NETWORK

ABSTRACT –

In this paper, character recognition system for documents written in Kannada language is proposed. Paper provides the technical details of design and implementation of proposed. Convolutional Neural Network (CNN) model is used for the implementation and Chars74K dataset is used for training the model. System has achieved accuracy of 98% for the document containing non-overlapping lines of characters.

IMAGE-BASED ESTIMATION OF REAL FOOD SIZE FOR ACCURATE FOOD CALORIE ESTIMATION

ABSTRACT –

In this paper, we review our works on image-based estimation of real size of foods for accurate food calorie estimation which including three existing works and two new works: (1) "CalorieCam" which is a system to estimate real food size based on a reference object, (2) Region segmentation based food calorie estimation, (3) "AR Deep CalorieCam V2" which is based on visual inertial odometry built in the iOS ARKit library, (4) "Depth CalorieCam" which employs stereo cameras on iPhone X/XS, and (5) "Rice CalorieCam" which exploits rice grains as reference objects. Especially, the last two new methods achieved 10% or less estimation error, which was enough for robust food calorie estimation

VISION-BASED TRAFFIC SIGN DETECTION AND RECOGNITION SYSTEMS

ABSTRACT –

The automatic traffic sign detection and recognition (TSDR) system is very important research in the development of advanced driver assistance systems (ADAS). Investigations on vision-based TSDR have received substantial interest in the research community, which is mainly motivated by three factors, which are detection, tracking and classification. During the last decade, a substantial number of techniques have been reported for TSDR. This paper provides a comprehensive survey on traffic sign detection, tracking and classification. The details of algorithms, methods and their specifications on detection, tracking and classification are investigated and summarized in the tables along with the corresponding key references. A comparative study on each section has been provided to evaluate the TSDR data, performance metrics and their availability. Current issues and challenges of the existing technologies are illustrated with brief suggestions and a discussion on the progress of driver

assistance system research in the future. This review will hopefully lead to increasing efforts towards the development of future vision-based TSDR system.

Automatic Motorcyclist Helmet Rule Violation Detection using Tensorflow&Keras in OpenCV.

ABSTRACT –

Motorcycle accidents have been hastily growing throughout the years in several countries because road safety is often neglected by riders worldwide leading to accidents and deaths. To address this issue, most countries have laws which mandate the use of helmets for two-wheeler riders so, it is very important for motorcyclists to understand the risks of riding without a helmet. Riders who do not wear helmets are at greatest risk of suffering a traumatic brain injury; if they met with an accident without protection, the head is susceptible to a harrowing impact in an accident. In India, there is a rule that mandate helmet only for riders but not even for passengers. Anyone may suffer from accident or head injuries whom are using motorcycle without helmet. It should be mandatory for everyone to wear helmet; even for children. So, to mandate this we have developed a system which is based on Tensorflow&Keras in the field of Computer Vision. System is able to detect whether motorcyclists wear helmet or not even at real time. If anyone of them is present with no helmet then system will precisely observed the situation and declare the rule violations. The system can be implemented in malls, offices, marts, school and college that only allows people to
enter the premises only after detecting helmet with automated barrier. It will definitely affect the use of helmet that will save humans life at all.

DEEP LEARNING FOR DEPRESSION DETECTION OF TWITTER USERS

ABSTRACT –

Mental illness detection in social media can be considered a complex task, mainly due to the complicated nature of mental disorders. In recent years, this research area has

started to evolve with the continuous increase in popularity of social media platforms that became an integral part of people's life. This close relationship between social media platforms and their users has made these platforms to reflect the users' personal life on many levels. In such an environment, researchers are presented with a wealth of information regarding one's life. In addition to the level of complexity in identifying mental illnesses through social media platforms, adopting supervised machine learning approaches such as deep neural networks have not been widely accepted due to the difficulties in obtaining sufficient amounts of annotated training data. Due to these reasons, we try to identify the most effective deep neural network architecture among a few of selected architectures that were successfully used in natural language processing tasks. The chosen architectures are used to detect users with signs of mental illnesses (depression in our case) given limited unstructured text data extracted from the Twitter social media platform.

IGTM33 - CROWD ANALYSIS WITH FACIAL EXPRESSION ANALYSIS

ABSTRACT -

Facial expression recognition has been a challenge for many years. With the recent growth in machine learning, a real-time facial expression recognition system using deep learning technology can be useful for an emotion monitoring system for Human-computer interaction(HCI). We proposed a Personal Facial Expression Monitoring System (PFEMS).We designed a custom Convolutional Neural Network model and used it to train and test different facial expression images with the TensorFlowmachine learninglibrary. PFEMS has two parts, a recognizer for validation and a data training model for data training. The recognizer contains a facial detector and a facial expression recognizer. The facial detector extracts facial images from video frames and the facial expression recognizer distinguishes the extracted images. The data training model uses the Convolutional Neural Network to train data and the recognizer also uses Convolutional Neural Network to monitor the emotional state of

a user through their facial expressions. The system recognizes the six universal emotions, angry, disgust, happy, surprise, sad and fear, along with neutral.

Detection of skin disease by using image processing

ABSTRACT –

In recent days, skin disease is seen as one of the most dangerous form of disease found in Humans. The detection of skin disease in early stage can be helpful to cure it. Computer vision can play important role in Medical Image Diagnosis and it has been proved by many existing systems. In this work, we present a computer aided method for the detection of Skin disease using Image Processing tools. The input to the system is the skin lesion image and then by applying novel image processing techniques, it analyses it to conclude about the presence of type of skin disease. To achieve this goal, feature extraction is considered as an essential-weapon to analyse an image appropriately. In this work, different digital images have been analysed based on unsupervised segmentation techniques. Feature extraction techniques are then applied on these segmented images. After this, a comprehensive discussion has been explored based on the obtained results.

PHISHING WEB SITES FEATURES CLASSIFICATION BASED ON EXTREME LEARNING MACHINE.

ABSTRACT –

Phishing are one of the most common and most dangerous attacks among cybercrimes. The aim of these attacks is to steal the information used by individuals and organizations to conduct transactions. Phishing websites contain various hints among their contents and web browser-based information. The purpose of this study is to perform Extreme Learning Machine (ELM) based classification for 30 features including Phishing Websites Data in UC Irvine Machine Learning Repository database. For results assessment, ELM was compared with other machine learning methods such

as Support Vector Machine (SVM), Naïve Bayes (NB) and detected to have the highest accuracy of 95.34%

BIRD SPECIES IDENTIFICATION USING DEEP LEARNING

ABSTRACT –

Now a day some bird species are being found rarely and if found classification of bird species prediction is difficult. Naturally, birds present in various scenarios appear in different sizes, shapes, colors, and angles from human perspective. Besides, the images present strong variations to identify the bird species more than audio classification. Also, human ability to recognize the birds through the images is more understandable. So this method uses the Caltech-UCSD Birds 200 [CUB-200-2011] dataset for training as well as testing purpose. By using deep convolutional neural network (DCNN) algorithm an image converted into grey scale format to generate autograph by using tensor flow, where the multiple nodes of comparison are generated. These different nodes are compared with the testing dataset and score sheet is obtained from it. After analyzing the score sheet it can predicate the required bird species by using highest score. Experimental analysis on dataset (i.e. Caltech-UCSD Birds 200 [CUB-200-2011]) shows that algorithm achieves an accuracy of bird identification between 80% and 90%

FAKE INDIAN CURRENCY RECOGNITION

ABSTRACT –

Indian is a developing country, Production, and printing of Fake notes of Rs.100, 500 and 1000 were already there but after the demonetization, the counterfeit notes of new Rs.50,200,500,2000 have also come to the light in very short time and which effects the country's economic growth. From last few years due to technological advancement in color printing, duplicating, and scanning, counterfeiting problems are coming into the picture. In this article, recognition and verification of paper currency with the help of digital image processing techniques is described. The characteristics extraction is

performed on the image of the currency and it is compared with the characteristics of the genuine currency. The currency will be recognized and verified by using image processing techniques. The approach consists of a number of components including image processing, edge detection, image segmentation and characteristic extraction and comparing images. The desired results will be the text and voice output of the currency recognized and verified.

VEHICLE CLASSIFICATION AND SPEED ESTIMATION USING COMPUTER VISION TECHNIQUES

ABSTRACT –

In this work, we implement a real-time vehicle classification and speed estimation system and apply it to videos acquired from traffic cameras installed in highways. In this approach we: a) Detect moving vehicles through background-foreground segmentation techniques. b) Compare different supervised classifiers (e.g. artificial neural networks) for vehicle classification into categories: (car, motorcycle, van, and bus/truck). c) Apply a calibration method to geo reference vehicles using satellite images. d) Estimate vehicles speed per class using feature tracking and nearest neighbor's algorithms

SMS SPAM DETECTION USING MACHINE LEARNING APPROACH.

ABSTRACT –

Over recent years, as the popularity of mobile phone devices has increased, Short Message Service (SMS) has grown into a multi-billion dollars industry. At the same time, reduction in the cost of messaging services has resulted in growth in unsolicited commercial advertisements (spams) being sent to mobile phones. In parts of Asia, up to 30% of text messages were spam in 2012. Lack of real databases for SMS spams, short length of messages and limited features, and their informal language are the factors that may cause the established email filtering algorithms to underperform in their

classification. In this project, a database of real SMS Spams from UCI Machine Learning repository is used, and after preprocessing and feature extraction, different machine learning techniques are applied to the database. Finally, the results are compared and the best algorithm for spam filtering for text messaging is introduced. Final simulation results using 10-fold cross validation shows the best classifier in this work reduces the overall error rate of best model in original paper citing this dataset by more than half.

VOICE BASED EMAIL FOR BLIND.

ABSTRACT –

As the title suggests, the application will be a web-based application for visually impaired persons using IVR- Interactive voice response, thus enabling everyone to control their mail accounts using their voice only and to be able to read, send, and perform all the other useful tasks. The system will prompt the user with voice commands to perform certain action and the user will respond to the same. The main benefit of this system is that the use of keyboard is completely eliminated, the user will have to respond through voice and mouse click only. Now you must be thinking that how will a blind person will see the correct position on the screen for doing mouse clicks. But this system will perform actions based on the clicks only that is left click or right click, it does not depends on the portion of the screen where the cursor is placed before the click giving user the freedom to click blindly anywhere on the screen

EXPLORING DEEP LEARNING IN SEMANTIC QUESTION MATCHING

ABSTRACT –

Question duplication is the major problem encountered by Q&A forums like Quora, Stack-overflow, Reddit, etc. Answers get fragmented across different versions of the same question due to the redundancy of questions in these forums. Eventually, this results in lack of a sensible search, answer fatigue, segregation of information and the paucity of response to the questioners. The duplicate questions can be detected using

Machine Learning and Natural Language Processing. Dataset of more than 400,000 questions pairs provided by Quoraare pre-processed through tokenization, lemmatization and removal of stop words. This pre-processed dataset is used for the feature extraction. Artificial Neural Network is then designed and the features hence extracted, are fit into the model. This neural network gives accuracy of 86.09%. In a nutshell, this research predicts the semantic coincidence between the question pairs extracting highly dominant features and hence, determine the probability of question being duplicate.

MACHINE LEARNING TECHNIQUES FOR STRESS PREDICTION IN WORKING EMPLOYEES

ABSTRACT –

Stress disorders are a common issue among working IT professionals in the industry today. With changing lifestyle and work cultures, there is an increase in the risk of stress among the employees. Though many industries and corporates provide mental health related schemes and try to ease the workplace atmosphere, the issue is far from control. In this paper, we would like to apply machine learning techniques to analyze stress patterns in working adults and to narrow down the factors that strongly determine the stress levels. Towards this, data from the OSMI mental health survey 2017 responses of working professionals within the tech-industry was considered. Various Machine Learning techniques were applied to train our model after due data cleaning and preprocessing. The accuracy of the above models was obtained and studied comparatively. Boosting had the highest accuracy among the models implemented. By using Decision Trees, prominent features that influence stress were identified as gender, family history and availability of health benefits in the workplace. With these results, industries can now narrow down their approach to reduce stress and create a much comfortable workplace for their employees.

ANALYSIS OF WOMEN SAFETY IN INDIAN CITIES USING MACHINE LEARNING ON TWEETS

ABSTRACT –

Women and girls have been experiencing a lot of violence and harassment in public places in various cities starting from stalking and leading to sexual harassment or sexual assault. This research paper basically focuses on the role of social media in promoting the safety of women in Indian cities with special reference to the role of social media websites and applications including Twitter platform Facebook and Instagram. This paper also focuses on how a sense of responsibility on part of Indian society can be developed the common Indian people so that we should focus on the safety of women surrounding them. Tweets on Twitter which usually contains images and text and also written messages and quotes which focus on the safety of women in Indian cities can be used to read a message amongst the Indian Youth Culture and educate people to take strict action and punish those who harass the women. Twitter and other Twitter handles which include hash tag messages that are widely spread across the whole globe sir as a platform for women to express their views about how they feel while we go out for work or travel in a public transport and what is the state of their mind when they are surrounded by unknown men and whether these women feel safe or not?

A SURVEY ON PLACEMENT PREDICTION SYSTEM USING MACHINE LEARNING

ABSTRACT –

The ease of making better choices and making better decisions in terms of selecting colleges is the main aim of this system. Our analysis on colleges for the students makes easier for them to make accurate decision about their preferred colleges. For such analysis, it requires future possibilities from the past record data which can potentially make the predictions and recommendation for students. Our analysis with the machine learning classification methods would help giving probable accuracy and this requires analytical methods for predicting future recommendation. Today, most students make mistakes in their preference list due to lack of knowledge, improper and incorrect

analysis of colleges and insecure predictions. Hence repent and regret after allotment. Our project will solve the general issue of the student community by using machine learning technology. In this system Random Forest and Decision Tree machine learning classification algorithm is going to use.

FAKE NEWS IDENTIFICATION ON TWITTER WITH HYBRID CNN AND RNN MODELS

ABSTRACT –

The problem associated with the propagation of fake news continues to grow at an alarming scale. This trend has generated much interest from politics to academia and industry alike. We propose a framework that detects and classifies fake news messages from Twitter posts using hybrid of convolutional neural networks and long-short term recurrent neural network models. The proposed work using this deep learning approach achieves 82% accuracy. Our approach intuitively identifies relevant features associated with fake news stories without previous knowledge of the domain.

EEG PATHOLOGY DETECTION USING ON DEEP CNN

ABSTRACT –

With the advancement of machine learning technologies, particularly deep learning, the automated systems to assist human life are flourishing. In this paper, we propose an automatic electroencephalogram (EEG) pathology detection system based on deep learning. Various types of pathologies can affect brain signals. Thus, the brain signals captured in the form of EEG signals can indicate whether a person suffers from pathology or not. In the proposed system, the raw EEG signals are processed in the form of a spatio-temporal representation. The spatio-temporal form of the EEG signals is the input to a convolutional neural network (CNN). Two different CNN models, namely, a shallow model and a deep model, are investigated using transfer learning. A fusion strategy based on a multilayer perceptron is also investigated.

HEART DISEASE PREDICTION USING ARTIFICIAL NEURAL NETWORK

ABSTRACT –

Mortality rate increases all over the world on daily basis. The reasons for this could be increase in the numbers of patient with cardiovascular disease. When considering death rates and large number of people who suffers from heart disease, it is revealed how important early diagnosis of heart disease. Traditional way of predicting Heart disease is doctor's examination or number of medical tests such as ECG, Stress Test, and Heart MRI etc. Nowadays, Health care industry contains huge amount of heath care data, which contains hidden information. This hidden information is useful for making effective decisions. Computer based information along with advanced Data mining techniques are used for appropriate results. Neural network is widely used tool for predicting Heart disease diagnosis. In this paper, a heart disease prediction system which uses artificial neural network backpropagation algorithm is proposed. 13 clinical features were used as input for the neural network and then the neural network was trained with back propagation algorithm to predict absence or presence of heart disease with accuracy of 95%.

AUTOMATIC DETECTION AND CLASSIFICATION OF WEAVING FABRIC DEFECTS BASED ON DIGITAL IMAGE PROCESSING

ABSTRACT-

this paper describes the detection and classification of fabric defects based on digital image processing. The work is intended to provide the higher speed and accuracy of defect detection than human vision and to find the source of the defects. At first, we find the size and position of wefts or warps from an image. Then calculate the pattern of weft and warp positions and figure out whether there is a defect or not. The patterns of weft and warp may differ based on the type of fabrics. Sample pattern of good fabric is used to detect and classify the defect of the fabric with same pattern. OpenCV library and python programming language is used for the experiment. Seven kinds of defects on the fabrics model images are detected and five real fabric images

are used for the experiment. The experiment shows the result of successful defect detection with 95% rate, and it is 50% faster than human vision in fabrics density calculation.

FLOWER SPECIES RECOGNITION SYSTEM USING CONVOLUTION NEURAL NETWORKS AND TRANSFER LEARNING

ABSTRACT –

Automatic identification and recognition of medicinal plant species in environments such as forests, mountains and dense regions is necessary to know about their existence. In recent years, plant species recognition is carried out based on the shape, geometry and texture of various plant parts such as leaves, stem, flowers etc. Flower based plant species identification systems are widely used. While modern search engines provide methods to visually search for a query image that contains a flower, it lacks in robustness because of the intra-class variation among millions of flower species around the world. Hence, in this proposed research work, a Deep learning approach using Convolutional Neural Networks (CNN) is used to recognize flower species with high accuracy. Images of the plant species are acquired using the built-in camera module of a mobile phone. Feature extraction of flower images is performed using a Transfer Learning approach (i.e. extraction of complex features from a pre-trained network). A machine learning classifier such as Logistic Regression or Random Forest is used on top of it to yield a higher accuracy rate. This approach helps in minimizing the hardware requirement needed to perform the computationally intensive task of training a CNN. It is observed that, CNN combined with Transfer Learning approach as feature extractor outperforms all the handcrafted feature extraction methods such as Local Binary Pattern (LBP), Color Channel Statistics, Color Histograms, Haralick Texture, Hu Moments and Zernike Moments. CNN combined with Transfer Learning approach yields impressive Rank-1 accuracies of 73.05%, 93.41% and 90.60% using Over Feat, Inception-v3 and Exception architectures, respectively as Feature Extractors on FLOWERS102 dataset.

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