CODE	TITLE	DESCRIPTION
VTPAI01	Real-Time On-Chip Machine-Learning-Based Wearable Behind-The-Ear Electroencephalogram Device for Emotion Recognition	These signals are captured from sensors placed behind the ear, making it non-intrusive and wearable. Machine learning algorithms implemented directly on the device analyze these signals to recognize patterns associated with different emotional states, allowing for real-time emotion recognition.
VTPAI02	Development of an Artificial Intelligence-Supported Hybrid Data Management Platform for Monitoring Depression and Anxiety Symptoms in the Perinatal Period	This project involves creating a hybrid data management platform using artificial intelligence algorithms analyze data to identify potential signs of depression and anxiety, offering a comprehensive tool for early detection and support in perinatal mental health care
VTPAI03	Ship Detection Based on Faster R-CNN Using Range-Compressed Airborne Radar Data	This project presents object-oriented ship detectors based on the faster region-based Convolutional Neural Network (R-CNN) and also by using dash framework and plotly, pytorch modules
VTPAI04	A Novel Length-Flexible Lightweight Cancelable Fingerprint Template for Privacy-Preserving Authentication Systems in Resource-Constrained IoT Applications	Fingerprint authentication techniques have been employed in various Internet of Things (IoT) applications for access control and privacy protection
VTPAI05	Yoga Pose Recognition with Real time Correction using Deep Learning	This research investigates a thorough analysis of yoga posture identification systems using computer vision, machine learning, and deep learning techniques
VTPAI06	Multi-View Computed Tomography Network for Osteoporosis Classification	This method involves analyzing bone density from multiple viewpoints or angles, leveraging a network specifically designed for this purpose. By examining CT scans from various perspectives, the network aims to enhance the accuracy of osteoporosis classification
VTPAI07	Multi-culture Sign Language Detection and Recognition Using Fine-tuned Convolutional Neural Network	Detect multi signs of ASL and Custom data to convey msg to listener from input image using HDNN
VTPAI08	Pest Detection and Classification in Peanut Crops Using CNN, MFO, and EViTA Algorithms	To help farmers in finding pest types and detection from input image using CNN
VTPAI09	A Study on Food Value Estimation from Images: Taxonomies, Datasets, and Techniques	Food classification & recognition with their good value factors from input image using ResNet50

CODE	TITLE	DESCRIPTION
VTPAI10	An Intelligent Disease Prediction and Drug Recommendation Prototype by Using Multiple Approaches of Machine Learning Algorithm	This prototype harnesses various ML approaches to analyze patient data, predict diseases accurately, and recommend tailored drug treatments. By amalgamating multiple algorithms
VTPAI11	E-Learning Ecosystems for People With Autism Spectrum Disorder	E-Learning Ecosystems for People With Autism Spectrum Disorder focus on tailored online educational platforms and tools designed to provide a supportive and adaptive learning environment, addressing the unique needs and challenges of individuals on the autism spectrum. These ecosystems employ specialized content, interactive features, and sensory-friendly interfaces to enhance accessibility and promote inclusive education."
VTPAI12	Wireless Capsule Endoscopy Image Classification: An Explainable AI Approach	A variety of Deep Learning (DL) models exist for the purposes of image classification in the medical domain, more analysis needs to be conducted on their decision-making processes. For this reason, several novel Explainable AI (XAI) techniques have been proposed in recent years to better understand DL models.
VTPAI13	Evaluation of Human Pose Recognition and Object Detection Technologies	Human pose recognition and object detection, advancements in deep learning architectures, feature representations, and training strategies have significantly improved accuracy, speed, and robustness. The choice of technology depends on factors like application requirements, dataset size, real-time performance, and computational resources available
VTPAI14	T-YOLO: Tiny Vehicle Detection Based on YOLO and Multi-Scale Convolutional Neural Networks	Multi-scale CNNs enhance accuracy by processing features at various resolutions, allowing the model to detect vehicles of different sizes within images efficiently. This fusion approach empowers precise and rapid vehicle identification, essential for applications like traffic management and autonomous driving systems
VTPAI15	Vision Transformer and Language Model Based Radiology Report Generation	By combining Vision Transformers for image understanding and Language Models for natural language generation, this approach autonomously generates detailed and accurate reports describing radiographic findings. This fusion of image analysis and language processing enhances efficiency in medical diagnostics, aiding radiologists in report creation from imaging data
VTPAI16	A Deep Learning-Based Experiment on Forest Wildfire Detection in Machine Vision Course	Using advanced neural network techniques, this experiment aims to train models to identify and predict wildfires from visual data, offering insights into leveraging machine learning for early wildfire detection
VTPAI17	A Privacy-Preserving Remote Heart Rate Abnormality Monitoring System	To find Arrthymia detection using heart rate sound file through Neural Networks
VTPAI18	Road Crack Detection Using Deep Neural Network Based on Attention Mechanism and Residual Structure	Detect cracks in the road for safety purpose through image input

CODE	TITLE	DESCRIPTION	
VTPNLP01	WTASR: Wavelet Transformer for Automatic Speech Recognition of Indian Languages	This project is regarding converting Audio to text of Indian languages using deep learning techniques	IEEE 2023 - NATURAL LANGUAGE PROCESSING
VTPNLP02	IRWoZ: Constructing an Industrial Robot Wizard-of-OZ Dialoguing Dataset	In this work, we present an Industrial Robot Wizard-of-Oz Dialoguing Dataset (IRWoZ) focused on enabling HRC in manufacturing tasks	
VTPNLP03	EMPOLITICON: NLP and ML Based Approach for Context and Emotion Classification of Political Speeches from Transcripts	NLP techniques with machine learning algorithms, empowers Empoliticon to dissect political speeches, unveiling the emotions conveyed and contextual dimensions embedded within them	
VTPNLP04	Offensive language Detection using NLP	Detecting offensive language using Natural Language Processing (NLP) involves leveraging machine learning models to identify text that contains offensive, abusive, or inappropriate content	
VTPNLP05	Cyberbullying Detection in Social Networks	Cyberbullying detection for input messages of user using Word Convolutional Neural Network (word CNN)	
VTPNLP06	Using a Language Model to Generate Music in Its Symbolic Domain While Controlling Its Perceived Emotion	Leveraging a Language Model, this approach generates music in its symbolic form while controlling the perceived emotional content. By employing advanced language-based algorithms, this method orchestrates the composition of music, manipulating its emotional nuances and expressions during the creative process	
VTPNLP07	Text Mining and Emotion Classification on Monkey pox Twitter Dataset: A Deep Learning-Natural Language Processing (NLP) Approach	Applying Deep Learning-NLP techniques to analyze emotions in Monkeypox-related tweets can provide insights into public sentiments, concerns, and attitudes surrounding the topic. This approach aids in understanding how people express emotions and reactions in the context of health-related events on social media platforms	
VTPNS01	Novel Class Probability Features for Optimizing Network Attack Detection With Machine Learning	Novel Class Probability Features for Optimizing Network Attack Detection With Machine Learning" introduces innovative features to enhance network attack detection using machine learning	IEEE 2023 NETWORK SECURITY
VTPNS02	Data Secure De-Duplication and Recovery Based on Public Key Encryption with Keyword Search	Search involves a method to securely store and retrieve duplicate data while ensuring privacy. Public key encryption enables storage optimization by identifying and eliminating duplicate files, yet maintains security by encrypting data using public keys	

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VTPNS03	Secret Image Sharing Schemes	This survey delves into various techniques and protocols designed to split images into shares, ensuring confidentiality and integrity. By exploring diverse approaches like visual cryptography, threshold techniques, and multifactor authentication	IEEE 2023 - NETWORK SECURITY
VTPNS04	Lightweight Biomedical Image Encryption Approach	The Lightweight Biomedical Image Encryption Approach introduces a method for securing biomedical images efficiently. This approach employs lightweight encryption techniques tailored for biomedical data	
VTPNS05	Delegate and Verify the Update Keys of Revocable Identity-Based Encryption	Verify the updated keys to identify encryption data for decryption	
VTPIM01	Enhancing Breast Cancer Classification in Histopathological Images through Federated Learning Framework	This approach employs advanced image analysis techniques to improve the precision of breast cancer classification from microscopic images	IEEE 2023 - IMAGE PROCESSING
VTPIM02	A Smart Contract Vulnerability Detection Mechanism Based on Deep Learning and Expert Rules	The Smart Contract Vulnerability Detection Mechanism integrates deep learning with expert rules to identify vulnerabilities in blockchain-based smart contracts. By combining advanced neural network models and expert-defined rules	
VTPIM03	Activity Classification and Fall Detection Using Monocular Depth and Motion Analysis	The aims to categorize activities and detect falls by analyzing depth and motion. By examining the depth and movement captured in the video, the goal is to develop a system that can recognize different activities and identify instances of falling, potentially aiding in monitoring and ensuring safety	
VTPWB01	A Novel Approach for Disaster Victim Detection Under Debris Environments Using Decision Tree Algorithms with Deep Learning Features	To detect victim in Disaster events message input using web	IEEE 2023 - WEB BASED
VTPWB02	Multi-Exposure Fusion with Guidance Information: Night Color Image Enhancement for Roadside Units	Captured night images will be unclear, we will increase Night Color for Image Enhancement	
VTPWB03	Machine Learning Techniques Applied to the Development of a Fall Risk Index for Older Adults	Old people fall will be risk for their life's to reduce that we are giving sensor based manual input to find fall detection	

CODE	TITLE	DESCRIPTION	
VTPCC01	An Efficient Post-Quantum Attribute-Based Encryption Scheme Based on Rank Metric Codes for Cloud Computing	An Efficient Post-Quantum Attribute-Based Encryption (ABE) scheme based on Rank Metric Codes offers robust security for cloud computing. Utilizing rank metric codes, it safeguards data by allowing access based on specific attributes, ensuring confidentiality in a post-quantum setting. This innovative encryption scheme enhances cloud security	IEEE 2023 - CLOUD COMPUTING
VTPCC02	Secure Cloud-Aided Approximate Nearest Neighbor Search on High-Dimensional Data	This method leverages cloud resources to perform approximate nearest neighbor searches while ensuring data privacy through encryption or secure protocols. By enabling quick and accurate search operations on complex, high-dimensional data, this approach optimizes retrieval tasks without compromising confidentiality in cloud-based systems	
VTPCC03	ZSS Signature-Based Audit Message Verification Process for Cloud Data Integrity	Message Verification using Unique Signature data for identification of users with RTPA	
VTPCC04	Efficient Identity-Based Data Integrity Auditing With Key-Exposure Resistance for Cloud Storage	Once the user's private key for auditing is exposed, we construct a novel and efficient identity-based data integrity auditing scheme with key-exposure resilience for cloud storage	
VTPDM01	Classification and Prediction of Significant Cyber Incidents (SCI) Using Data Mining and Machine Learning (DM-ML)	This approach analyzes historical data to classify and predict significant cyber incidents, enabling proactive measures to mitigate potential threats. It enhances cybersecurity by leveraging advanced algorithms	IEEE 2023 - DATA MINING
VTPDM02	Author-Profile-Based Journal Recommendation for a Candidate Article: Using Hybrid Semantic Similarity and Trend Analysis	By assessing an author's profile and article content, this method suggests suitable journals for publication, leveraging semantic understanding and current trends in scholarly work. This approach aids researchers by providing tailored recommendations, enhancing the visibility and relevance of their articles within the academic community.	
VTPDM03	Context-Aware Customer Needs Identification by Linguistic Pattern Mining Based on Online Product Reviews	Take user reviews on online products to find user/customer needs for further	
VTPDM04	A Robust Image Watermarking Scheme Based on Image Normalization and Contourlet Transform	Finding and extracting water marks from image in database	

CODE	TITLE	DESCRIPTION
VTPBC01	Blockchain-Based Process Quality Data Sharing Platform for Aviation Suppliers	Blockchain technology to facilitate the secure sharing of quality data among aviation suppliers. It aims to enhance transparency and trust in the aviation supply chain by leveraging the decentralized and tamper-resistant nature of blockchain for maintaining and exchanging process quality information
VTPBC02	Harnessing Big Data Analytics for Healthcare	Data analytics in the healthcare sector. It comprehensively examines various frameworks, discusses the implications of employing such analytics, explores diverse applications within healthcare, and evaluates the broader impacts, shedding light on how these technologies enhance decision-making processes and overall outcomes in the field of healthcare
VTPBC03	Blockchain-Based Decentralized Storage Networks	This survey explores decentralized storage networks built on blockchain technology, examining their features, advantages, and challenges. It provides a comprehensive overview of the current landscape, highlighting key trends and innovations in the realm of blockchain-based storage systems
VTPBC04	A Consent-Based Privacy-Compliant Personal Data-Sharing System	Personal data is becoming increasingly valuable in business, as the insights that can be obtained from data processing continue to improve. However, it also can cause adverse effects on individuals. To improve data quality while satisfying privacy compliance, companies
VTPBC05	Dynamic AES Encryption and Blockchain Key Management A Novel Solution for Cloud Data Security	This approach significantly enhances file-level security, curtailing an attacker's ability to decrypt multiple files even if a key is compromised. The second phase introduces blockchain technology, where keys are securely stored with accompanying metadata, bolstering security and data integrity. Elliptic Curve Cryptography (ECC) public key encryption enhances security during transmission and storage, while also facilitating secure file sharing.
VTPBC06	Secure and Lightweight Blockchain Enabled Access Control for Fog Assisted IoT Cloud Based Electronic Medical Records Sharing	As for the advancement of IoT and cloud computing in healthcare, outsourcing encrypted Electronic medical records (EMRs) created by the aggregation of medical treatment applications and health data collected from IoT devices enables high accessibility, effective collaboration, and zero computational operation cost