

| CODE | TITLE | DESCRIPTION |
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| VTPML01 | Applying Machine Learning Algorithms for the Classification of Sleep Disorders | This project focuses on developing and evaluating machine learning models to accurately classify different sleep disorders based on patient data |
| VTPML02 | Machine Learning - Based Cardiovascular Disease Detection Using Optimal Feature Selection | This project aims to develop a robust machine learning model for detecting cardiovascular diseases by selecting the most relevant features from patient data to improve prediction accuracy. |
| VTPML03 | A Novel Web Framework for Cervical Cancer Detection System | This project involves creating a web-based platform that utilizes machine learning algorithms to assist in the early detection of cervical cancer, potentially improving patient outcomes. |
| VTPML04 | Enhancing Medicare Fraud Detection Through Machine Learning: Addressing Class Imbalance With SMOTE-ENN | This project explores the use of machine learning techniques, specifically addressing class imbalance issues, to improve the detection of fraud within the Medicare system |
| VTPML05 | Hybrid Machine Learning Model for Efficient Botnet Attack Detection in IoT Environment | This project develops a hybrid machine learning model to effectively detect and mitigate Botnet attacks within the Internet of Things (IoT) environment. |
| VTPML06 | An Improved Concatenation of AI Models for Predicting and Interpreting Ischemic Stroke | This project investigates the use of an improved AI model concatenation approach for accurate prediction and interpretation of ischemic stroke occurrences |
| VTPML07 | Investigating Evasive Techniques in SMS Spam Filtering | This project compares different machine learning models in the context of SMS spam filtering, focusing on identifying and mitigating evasion techniques used by spammers |
| VTPML08 | Enhancing the Prediction of Employee Turnover With Knowledge Graphs and Explainable AI | This project aims to improve the prediction of employee turnover by leveraging knowledge graphs and incorporating explainable AI techniques to provide insights into the underlying factors |
| VTPML09 | Cardio-tocography Data Analysis for Fetal Health Classification Using Machine Learning Models | This project utilizes machine learning models to analyze cardio-tocography data and classify fetal health status, potentially aiding in early detection of potential complications |

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| VTPML10 | Head injury detection using machine learning | This project explores the application of machine learning algorithms to detect head injuries, potentially assisting in medical diagnosis and treatment. |
| VTPML11 | Predicting Heart Diseases Using Machine Learning and Different Data Classification Techniques | This project investigates the use of various machine learning classification techniques for predicting the occurrence of heart diseases based on patient data |
| VTPML12 | Liver Cirrhosis Stage Classification using Machine Learning | This project focuses on developing machine learning models to accurately classify the stage of liver cirrhosis based on patient data and clinical observations |
| VTPML13 | Identification of Social Anxiety in High School: A Machine Learning Approaches to Real-Time Analysis of Student Characteristics | This project utilizes machine learning techniques to identify social anxiety in high school students by analyzing real-time data related to student characteristics and behavior |
| VTPML14 | Predicting Hospital Stay Length Using Explainable Machine Learning | This project aims to predict the length of hospital stays for patients using explainable machine learning models, providing valuable insights for healthcare resource planning and patient care |
| VTPML15 | Optimal Ensemble Learning Model for Dyslexia Prediction Based on an Adaptive Genetic Algorithm | This project develops an optimal ensemble learning model for predicting dyslexia using an adaptive genetic algorithm to optimize the combination of different machine learning models |
| VTPML16 | Toward Improving Breast Cancer Classification Using an Adaptive Voting Ensemble Learning Algorithm | This project explores the use of an adaptive voting ensemble learning algorithm to improve the accuracy and robustness of breast cancer classification models |
| VTPML17 | Machine Learning based Method for Insurance Fraud Detection on Class Imbalance Datasets with Missing Values | This project focuses on developing a machine learning-based method for detecting insurance fraud in datasets with class imbalance and missing values. |
| VTPML18 | An Approach for Crop Prediction in Agriculture: Integrating Genetic Algorithms and Machine Learning | This project investigates an approach for predicting crop yields in agriculture by integrating genetic algorithms with machine learning techniques |

| CODE | TITLE | DESCRIPTION | IEEE 2024 - MACHINE LEARNING |
|---------|--|---|---------------------------------|
| VTPML19 | Novel Machine Learning Techniques for Classification of Rolling Bearings | This project explores novel machine learning techniques for the classification of rolling bearing conditions, which is crucial for equipment maintenance and reliability | |
| VTPML20 | Enhancing Rice Production Prediction in Indonesia Using Advanced Machine Learning Models | This project aims to enhance the prediction of rice production in Indonesia by utilizing advanced machine learning models and considering various factors influencing crop yields | |

| CODE | TITLE | DESCRIPTION |
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| VTPDL01 | Exploring Deep Learning and Machine Learning Approaches for Brain Hemorrhage Detection | This project investigates the use of deep learning and machine learning techniques for the detection of brain hemorrhages, potentially aiding in rapid diagnosis and treatment |
| VTPDL02 | Multi-Class Kidney Abnormalities Detecting Novel System Through Computed Tomography | This project aims to develop a novel system for detecting multiple types of kidney abnormalities using computed tomography scans and deep learning algorithms |
| VTPDL03 | Medicinal Plant Classification Using Particle Swarm Optimized Cascaded Network | This project explores the classification of medicinal plants using a cascaded network optimized by particle swarm optimization, potentially aiding in the identification and preservation of valuable plant species |
| VTPDL04 | Effective Hypertension Detection Using Predictive Feature Engineering and Deep Learning | This project focuses on developing an effective hypertension detection system by combining predictive feature engineering with deep learning models |
| VTPDL05 | Innovations in Stroke Identification: A Machine Learning-Based Diagnostic Model Using Neuro images | This project investigates innovative machine learning-based approaches for identifying strokes using neuro imaging data, potentially improving diagnostic accuracy and speed |
| VTPDL06 | RoI-Attention Network for Small Disease Segmentation in Crop Leaf Images | This project develops a region-of-interest attention network for segmenting small diseases in crop leaf images, aiding in the early detection and management of plant diseases |
| VTPDL07 | Classification of Down Syndrome in Children Using Neural Networks | This project explores the use of neural networks to classify Down syndrome in children based on various clinical and imaging data |
| VTPDL08 | A Large Dataset to Enhance Skin Cancer Classification with Transformer-Based Deep Neural Networks | This project involves creating a large dataset to improve skin cancer classification using transformer-based deep neural networks, potentially leading to more accurate and reliable diagnoses |
| VTPDL09 | A Reliable and Robust Deep Learning Model for Effective Recyclable Waste Classification | This project focuses on developing a deep learning model for accurate and efficient classification of recyclable waste, contributing to environmental sustainability efforts |

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| VTPDL10 | CiFake: Image Classification and Explainable Identification of Ai-Generated Synthetic Images | This project aims to develop CIFAKE, a system for classifying images and identifying AI-generated synthetic images using explainable deep learning techniques |
| VTPDL11 | Paddy Leaf Disease Classification Using Efficient Net B4 With Compound Scaling and Swish Activation: A Deep Learning Approach | This project investigates the use of EfficientNet B4 with compound scaling and swish activation for classifying paddy leaf diseases, potentially aiding in the prevention and management of crop diseases |
| VTPDL12 | Explainable Deep Learning to Classify Royal Navy Ships | This project explores the application of explainable deep learning techniques to classify Royal Navy ships based on various visual and sensor data |
| VTPDL13 | Tomato Quality Classification Based on Xception Algorithm Classifiers | This project focuses on classifying tomato quality by combining transfer learning feature extraction with machine learning classifiers, potentially aiding in the agricultural industry |
| VTPDL14 | Automatic Classification of White Blood Cells Using Deep Learning Models | This project investigates the use of a semi-supervised convolutional neural network for the automatic classification of white blood cells, potentially assisting in medical diagnosis |
| VTPDL15 | OTONet: Deep Neural Network for Precise Otoscopy Image Classification | This project aims to develop OTONet, a deep neural network for accurate classification of otoscopy images, potentially aiding in the diagnosis of ear-related conditions |
| VTPDL16 | JutePest-YOLO: A Deep Learning Network for Jute Pest Identification and Detection | This project develops JutePest, a deep learning network for identifying and detecting jute pests, potentially contributing to the protection and improvement of jute crop yields |
| VTPDL17 | Federated Deep Learning for Monkeypox Disease Detection | This project explores the use of federated deep learning techniques for detecting Monkeypox disease while preserving patient privacy and data security |
| VTPDL18 | Multi-Fruit Classification and Grading | This project focuses on developing a system for classifying and grading multiple types of fruits based on various quality parameters using deep learning algorithms |

| CODE | TITLE | DESCRIPTION | IEEE 2024 - DEEP LEARNING |
|---------|---|--|------------------------------|
| VTPDL19 | Classification of Oral Cancer into Pre-Cancerous Stages from White Light Images | This project investigates the classification of oral cancer into pre-cancerous stages using white light images and deep learning techniques, potentially aiding in early detection and treatment | |
| VTPDL20 | YogaPoseNet: Advanced Yogic Posture Classification Using NASNet Architecture | This project classifies different poses of a yoga using deep learning neural networks specifically with NASNet | |