PGP AIML
COHORT-11

ICD10 CODE PREDICTION

Can AIML simplify documentation for healthcare providers by efficient medical coding system?

By preprocessing clinical data and analyzing symptom patterns, the model helps improve efficiency in medical coding, reducing human error and speeding up documentation. This project seeks to create an innovative model that predicts ICD-10 codes from patient symptoms. By automating the ICD-10 coding process, traditional learning models can reduce administrative burdens, allowing healthcare professionals to focus more on patient care.

AIR QUALITY OF INDIA

Can AIML assist pollution control boards with timely air quality forecasts?

Air quality directly impacts our health and well-being of the population, especially for those with respiratory or heart conditions. Predicting the Air Quality Index help authorities for able preparedness , policy-making to tackle air pollution's effects, take proactive steps to safeguard public health and help people to make informed decisions about outdoor activities. Develop interpretable machine learning models to predict AQI of 7 days based on time series climate data.

CAPSTONE PROBLEM STATEMENTS

1. ICD10 CODE PREDICTION
2. AIR QUALITY OF INDIA
3. PREDICT STUDENTS' DROPOUT AND ACADEMIC SUCCESS

PREDICT STUDENTS' DROPOUT AND ACADEMIC SUCCESS

Can AIML leads to better educational outcomes and long-term benefits for both students and institutions by predicting drop outs?

Predicting student dropout and academic success is crucial for creating a supportive educational environment. Identifying students at risk of dropping out helps institutions take proactive steps to boost retention, enhance academic outcomes, engage in timely early interventions and drive overall institutional growth. Implement supervised machine learning model to predict student drop out based on demographic, socioeconomical and academic indicators.

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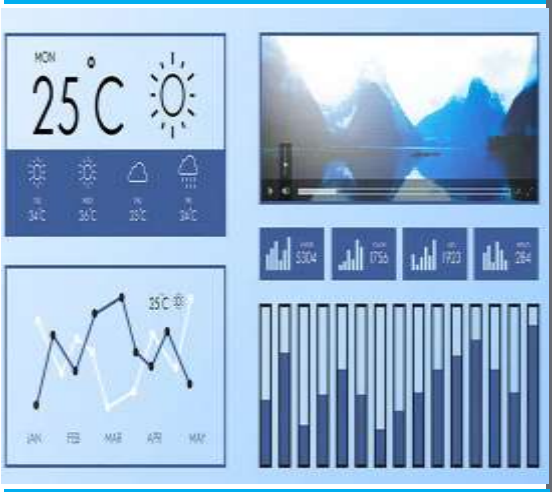
HUMAN ACTIVITY RECOGNITION FOR HEALTH MONITORING USING WEARABLE DEVICES

Health data are vital for tracking and promoting healthier lifestyles by monitoring physical activity in real-time. It can help detect early signs of health problems, encouraging timely interventions and can be extended to support personalized health recommendations. Implement a classification model to analyze data collected from smart werables to monitor & predict physical activity.



CLIMATE DATA ANALYSIS USING AIML

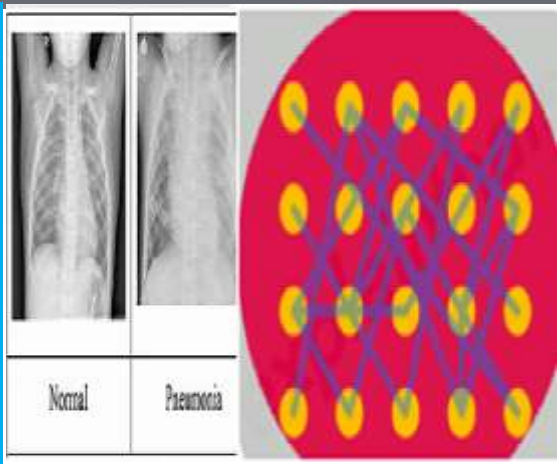
Can AIML suppport sustainable practices to support climate action?

Understanding long-term climate trends and variations, is crucial for informed environmental policies and decision-making. By analyzing climate data, identifation of emerging patterns, anomalies, and predict future conditions becomes easier. The insights gained can support climate action, enhance preparedness for extreme weather events, and drive sustainable practices. Implement forecastng models suited for the time series climate data.

CHEST X-RAY IMAGES (TUBERCULOSIS)

Can AIML detect infectous disease from imaging data?

Tuberculosis (TB) is a serious infectious disease that affects millions worldwide, and its early detection is critical for effective treatment. By classifying chest X-ray images to differentiate between normal and TB cases, deep learning models can provide medical practitioners with powerful diagnosis of infections at the earliest stages possible. Implement deep learning model to classify the X-ray images with presence or absence of Pneumonia.



CAPSTONE PROBLEM STATEMENTS

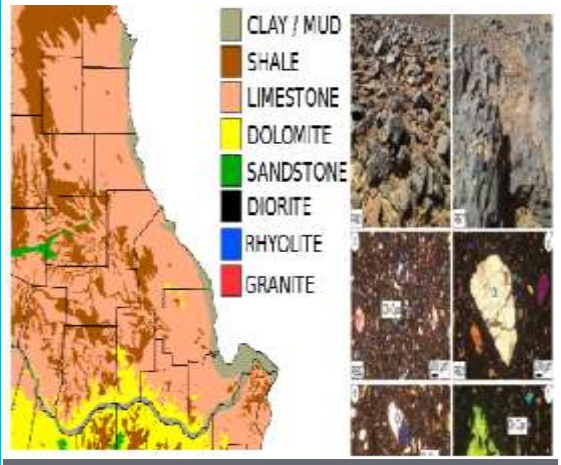
4. HUMAN ACTIVITY RECOGNITION FOR HEALTH MONITORING USING WEARABLE DEVICES
5. CLIMATE DATA ANALYSIS USING AIML
6. CHEST X-RAY IMAGES (TUBERCULOSIS)

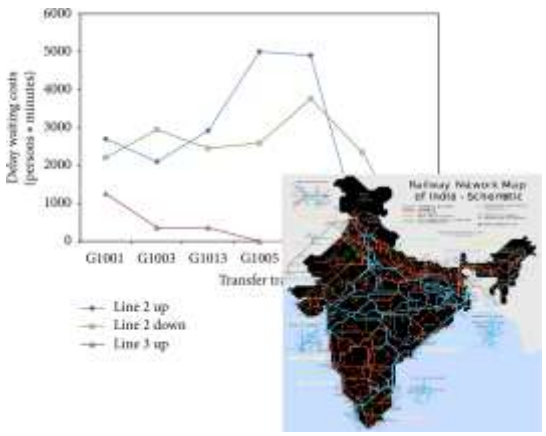
PGP AIML
COHORT-11

ROCK CLASSIFICATION

Can AIML powered by computer vision help Geologists classify rocks?

In geology, rock classification aid in advancing geological research, cultural preservation efforts and environmental protection. They provide insights into Earth's formation, plate tectonics, soil exploration/development, and even natural disaster prediction. Develop a Convolutional Neural Networks (CNN) enable precise detection of rock types, providing valuable support for research.





ESTIMATE TRAIN DELAYS OF INDIAN RAILWAYS

Can AIML support authorities to enhance service reliabilty with precision logics?

Delays in the scheduled arrival / departures in railway network can significantly impact both passengers and operations. Traditional learning models can help identify underlying causes of delays, allowing for better scheduling and resource allocation. This aids precision technology, optimize scheduling and provide a smoother, efficient travel experience and increased customer satisfaction. Implement machine learning models to estimate train delays on Indian Railways, using key factors like scheduling, pricing, and availability.

CAPSTONE PROBLEM STATEMENTS

7. ROCK CLASSIFICATION
8. ESTIMATE TRAIN DELAYS OF INDIAN RAILWAYS

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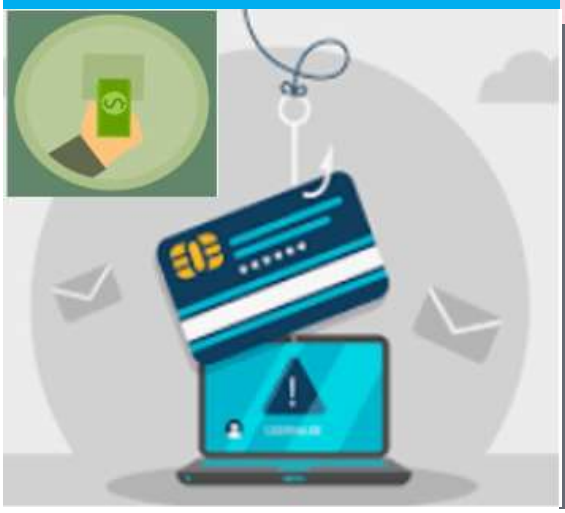
INSURANCE CLAIM PREDICTION

Can AIML predict insurance outcomes?

Predicting insurance results with high accuracy can help insurers make more informed decisions, reduce risks, and improve customer service. By leveraging machine learning, the solution enhances efficiency and enables faster, more reliable claims assessments. Develop supervised ensemble learners to optimize asset insurance processes by providing data-driven insights into potential outcomes.



INSURANCE FRAUD DETECTION

Can AIML detect fraud in insurance claim?

Fraudulent financial transactions can lead to significant loss. Detecting fraud is essential for financial institutions to protect their customers, assets and enhances the security of financial systems. Develop supervised machine learning model from structured data to detect insurance fraud with precision.

CAPSTONE PROBLEM STATEMENTS

9. INSURANCE CLAIM PREDICTION

10. INSURANCE FRAUD DETECTION