Pragyan is a Techno-Managerial Festival organized at National Institute of Tiruchirappali (NITT). Pragyan is a three-day event held annually in the month of February. It was first conceived in 2005 by then students and staff, and now it has evolved to be the India's biggest techno-managerial fest. It boasts an annual participation of 15000 students from colleges across India. It is also the first student-run organization to receive an ISO certification.

ABOUT NPCI

The National Payments Corporation of India (NPCI) is an umbrella organization for operating retail payments and settlement systems in India. Established in 2008 with the guidance and support of the Reserve Bank of India and the Indian Banks' Association, NPCI aims to create a robust payment and settlement infrastructure in the country. Products include:

- Unified Payments Interface (UPI): An instant real-time payment system developed by NPCI to facilitate inter-bank transactions through mobile phones.
- RuPay: India's indigenous card payment network, offering a domestic alternative for electronic payments.
- BHIM (Bharat Interface for Money): A mobile app developed by NPCI to facilitate simple and quick payment transactions using UPI.
- Aadhaar Enabled Payment System (AePS): A system allowing banking services through Aadhaar-based authentication.
- Immediate Payment Service (IMPS): An instant inter-bank electronic funds transfer system available 24/7.

NPCI's initiatives have significantly advanced digital payments in India, promoting financial inclusion and contributing to the country's shift towards a cashless economy.

Objective

Financial institutions face challenges in detecting and preventing fraudulent transactions, which can result in significant financial losses. Develop an AI/ML model that analyzes transaction patterns and user behaviors to detect and flag potentially fraudulent activities on UPI scale.

Potential Area of Focus

01 Real Time scalability: The model should be scalable for a large amount of data for real time applications.

02 Adaptivity & Dynamicity: Development of learning mechanisms which can update the model in response to new fraudulent transactions

Expected Deliverables

01 Model Development: A high accuracy model is to be developed along with the likelihood of the transaction

02 Documentation: Comprehensive documentation detailing the system architecture, logic and methodology.

Evaluation Criteria

01 Performance Metrics: The accuracy of the model depicted in terms of F1-Score, both micro and macro f1-scores.'

02 Innovation: Creativity and originality in solving the challenges of fraudulent transaction detection.

03 Technical Implementation: The technical soundness and the scalability of the solution.