

# EC5406 Software Group Project

Department of Electrical and Information Engineering

Faculty of Engineering

University of Ruhuna

## Sprint Evaluation – Progress Tracker

### Tasks Completed Under Sprint 2

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#### 1. Backend Development

- Implemented **User Registration and Login** functionality using **FastAPI**
- Integrated **PostgreSQL** as the database
- Applied strong security measures:
  - **12-character password policy**
  - **JWT-based authentication** for secure session handling
- Ensured the registration and login flow follows best security practices

#### 2. System Design

- Created **UML diagrams**
- Designed **ER diagram** for database structure
- Developed **transaction flow diagram** to represent system workflow

#### 3. Machine Learning Preparation

- Data set Link: <https://www.kaggle.com/datasets/valakhorasani/bank-transaction-dataset-for-fraud-detection/data>
- Selected and downloaded a relevant **transaction dataset**
- Started the **data preprocessing phase**, including:
  - Cleaning
  - Formatting
  - Preparing data for model training

#### 4. Simulation Planning

- Create a **user transaction simulator** to generate normal and suspicious transactions for **ML training and fraud detection testing**

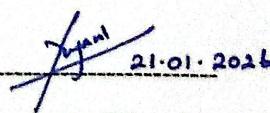
To be completed by the evaluator

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Remarks: *Divide your work properly. All of you should work equally.*  
*Add use case diagram.*

MS. Yugani Gamlath

Name of the evaluator

 Date and Signature