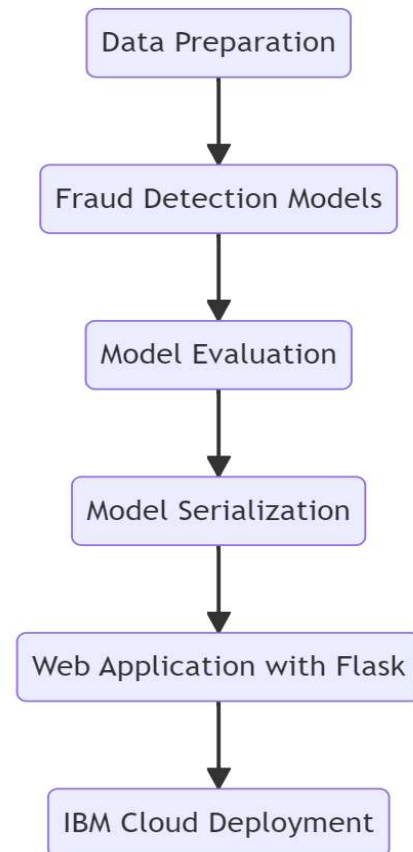


**Project Design Phase-II**  
**Data Flow Diagram & User Stories**

Date	18 November 2023
Team ID	Team-592013
Project Name	Online Payments Fraud Detection Using ML
Maximum Marks	4 Marks

**Data Flow Diagrams:**



## User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Data Scientist	Data Preparation	US001	As a data scientist, I need to collect and preprocess a large dataset of credit/debit card transactions.	Dataset is cleaned, missing data handled, and variables encoded and scaled.	High	First
Data Scientist	Fraud Detection Models	US002	As a data scientist, I want to implement classification algorithms and train/test them on the prepared dataset.	Models include Decision Tree, Random Forest, SVM, Extra Tree, and XGBoost.	High	First
Data Scientist	Model Evaluation	US003	As a data scientist, I need to evaluate models using metrics like accuracy, precision, recall, and F1-score.	Best-performing model is selected based on comprehensive evaluation.	High	First
Data Scientist	Model Serialization	US004	As a data scientist, I want to save the selected model in a serialized format for easy integration and deployment.	Model is saved in Pickle (.pkl) format using joblib or pickle library.	High	First

Web Developer	Web Application with Flask	US005	As a web developer, I need to create a Flask web application with an interface for users to input transaction details.	Flask app includes HTML form for input and routes for data processing and prediction display.	High	Second
Web Developer	IBM Cloud Deployment	US006	As a web developer, I want to deploy the Flask application on IBM Cloud using Cloud Foundry or Kubernetes.	Flask app is successfully deployed on IBM Cloud, utilizing the chosen deployment service.	High	Second
Project Manager	Security and Compliance	US007	As a project manager, I need to ensure data privacy and security measures are in place, especially with sensitive data.	Security measures are implemented, complying with industry standards and regulations.	High	Third
Data Scientist	Model Maintenance and Monitoring	US008	As a data scientist, I want to implement logging and monitoring in the deployed application for tracking and analysis.	Logging and monitoring are set up to track application performance and enable timely model updates.	High	Ongoing