

# High-Level Design Document

## 1. Project Overview

The project focuses on predicting cryptocurrency liquidity using historical price and volume data to help identify early signs of market instability.

## 2. System Architecture

The system consists of five major components: data collection, preprocessing, feature engineering, model training, and a Flask-based deployment layer.

## 3. Tech Stack

- Python
- Pandas, NumPy
- XGBoost
- Flask
- Jupyter Notebooks / VS Code

## 4. Deployment Architecture

The model is served through a locally deployed Flask API which accepts input features and returns a JSON prediction of liquidity.