**Cryptocurrency Liquidity Prediction for Market Stability**

– Wireframe Documentation

Domain: Machine Learning

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Date: 14/05/2025

Version: 1.0

# Introduction

Purpose

This document presents the wireframe design for the Cryptocurrency Liquidity Prediction project. It describes the structure and layout of the user interface (UI) for a web application that predicts liquidity levels of cryptocurrencies based on user inputs.

Scope

- Enables users to enter key crypto features (price, volume, % changes, etc.)

- Predicts liquidity ratio using a trained ML model

- Displays prediction results and classification label (Low / Medium / High)

- Designed for responsiveness across devices

Objectives

- Design a clean, intuitive interface for entering crypto data

- Present prediction output clearly and attractively

- Integrate front-end UI with Flask backend API

- Provide error handling and input validation

# Wireframe Overview

The UI consists of the following pages:

- Home Page: Project overview with navigation

- Prediction Page: A form for entering crypto metrics

- Result Display: Shows the predicted liquidity ratio and its classification

# User Flow

1. User opens the Home Page → clicks "Start Prediction"

2. Navigated to Prediction Page

3. User fills in inputs → clicks Predict

4. Result is displayed on Result Page with prediction and classification

# Page Wireframes

1. Home Page

- App title and brief introduction

- Button: "Start Prediction" → links to /

2. Prediction Page (Form Elements)

- Inputs:

- Price (numeric)

- 1h % Change (numeric)

- 24h % Change (numeric)

- 7d % Change (numeric)

- 24h Volume (numeric)

- Market Cap (numeric)

- Liquidity Ratio (computed or optional)

- Button: Predict (submits form)

3. Result Page

- Predicted Liquidity Ratio: float (2–3 decimal places)

- Liquidity Classification:

- Low if < 0.05

- Medium if 0.05–0.15

- High if > 0.15

# API Integration

Backend Framework: Flask

- Form submission triggers a POST request to /predict

- Flask routes handle the form and invoke ML model

- Response sent back and rendered on the same HTML page

API Request Format (Backend Logic):

{ 'price': 2784.67, '1h': 0.14, '24h': 1.21, '7d': -2.57, '24h\_volume': 58000000, 'mkt\_cap': 320000000, 'volatility\_score': 1.31 }

API Response Example:

{ 'Predicted Liquidity Ratio': '0.129', 'Liquidity Classification': 'Medium' }

# UI Design Considerations

- Clean layout with proper spacing

- Use input type="number" for numeric validation

- Display errors (e.g., "Please enter valid numeric values")

- Show prediction and classification in a card or box format

- Mobile and desktop responsive using simple CSS or Bootstrap

# Conclusion

This wireframe documentation provides a structured and minimal design for the Cryptocurrency Liquidity Prediction web interface. The design focuses on user experience, effective integration with the backend, and real-time prediction display. It guides UI developers on layout, input validation, error handling, and response rendering.