# Low-Level Design (LLD) - Cryptocurrency Liquidity Predictor

## Overview

Low-level design and function descriptions for modules in src/.

## data\_preprocessing.py

Functions: load\_and\_concat(paths), parse\_dates(df), impute\_numeric\_with\_median(df), create\_cleaned\_csv(...)

Output: cleaned CSV for downstream processing.

## feature\_engineering.py

add\_features(df): creates price\_prev, price\_change\_pct, log\_return, volume\_ma\_7, volume\_ma\_30, liquidity\_ratio.

## model\_training.py

train\_models(df): performs time-aware split, trains LinearRegression and RandomForest, saves RF model (joblib).

Evaluation: RMSE, MAE, R2 written to console and returned.