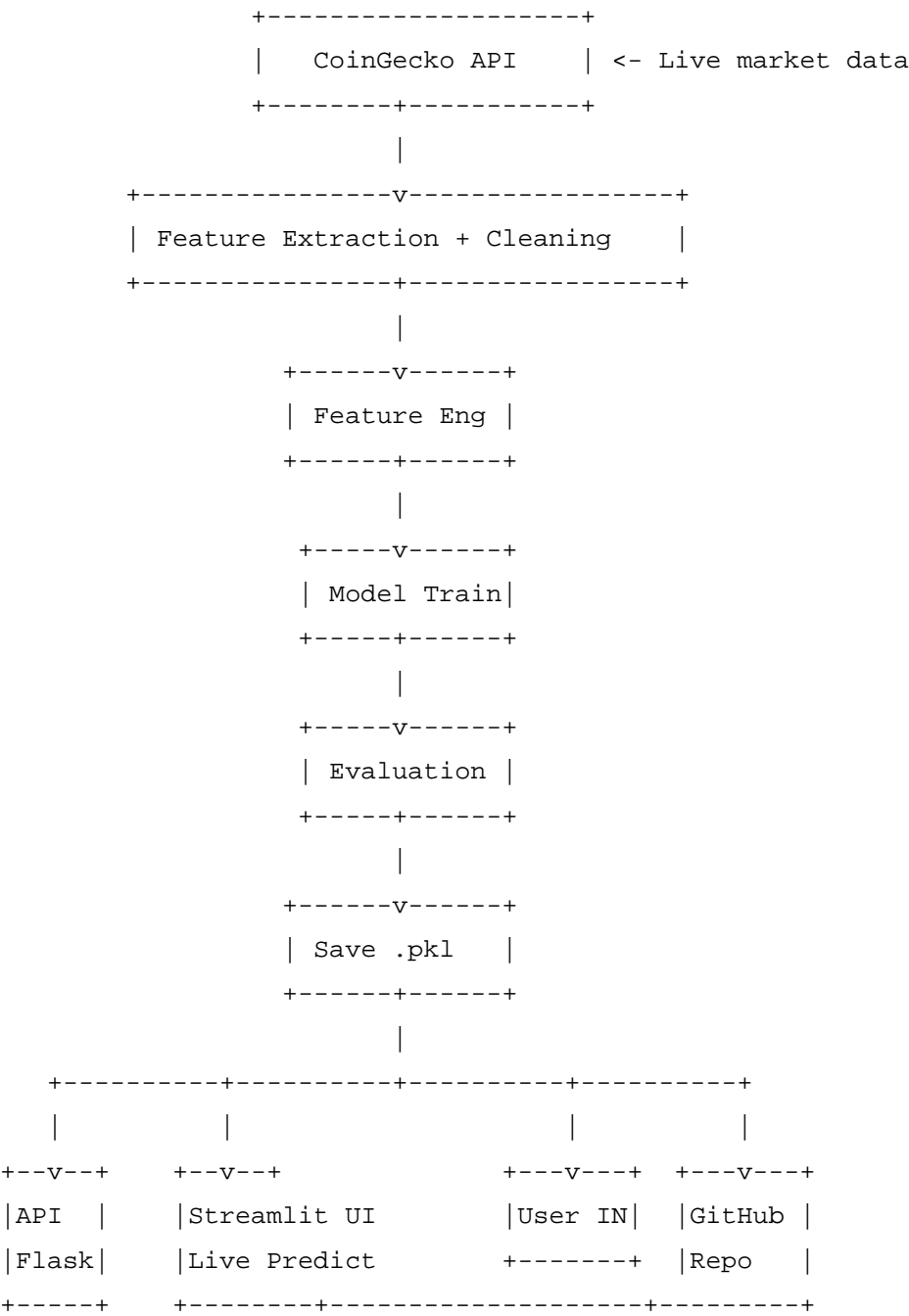


Pipeline Architecture: Crypto Liquidity Prediction

Overview:

A modular ML pipeline that processes cryptocurrency market data, trains a model to predict liquidity ratio, and deploys it using both Flask (API) and Streamlit (UI), enhanced with real-time data from CoinGecko API.

Architecture Flow:



Components Explained:

Data Source:	CoinGecko API + historical CSVs
Preprocessing:	Drop nulls, convert %, clean schema
Feature Engineering:	Liquidity ratio (volume/mkt cap), volatility
Model:	RandomForestRegressor (XGBoost optional)
Evaluation:	R ² Score and RMSE
Deployment:	Flask (API) + Streamlit (UI)
Live Prediction:	Streamlit fetches live API data, makes prediction