Product Design

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Design Overview

Architectural design

The Segment of our analysis and code are relatively separate and functionally independent. We shall develop the entire code on Python using the existing Rule based code and adding in Python and developing Neural Nets in PyTorch / Tensorflow.

System interfaces

User Interface

There is no direct user interface, only a Telegram messaging bot which sends notifications with `/buy` or `/sell` tags as advice to the user. It attaches the rule that raised the flag and graphs for detail.

Class	Information
DataGrabber	Keeps the data on CryptoCurrencies and their value history. Queries the binance data. Exposes get_price(date, coin) function to access price of coins. Caches data being saved to a local database
Messages	Exposes the telegram message sending API via a wrapper. send_message(message, tag, image) will be the function to call, allows you to send graph as well.
Predictors	Classes that help predict the market going up or down. 1. Rule Based 2. ML Model 3. Pump Detect All these have a predict function, they keep a DataGrabber object and you get UP/DOWN as output
Advisor	Takes an array of predictors and a Messages client and gives `/buy` or `/sell` as output.

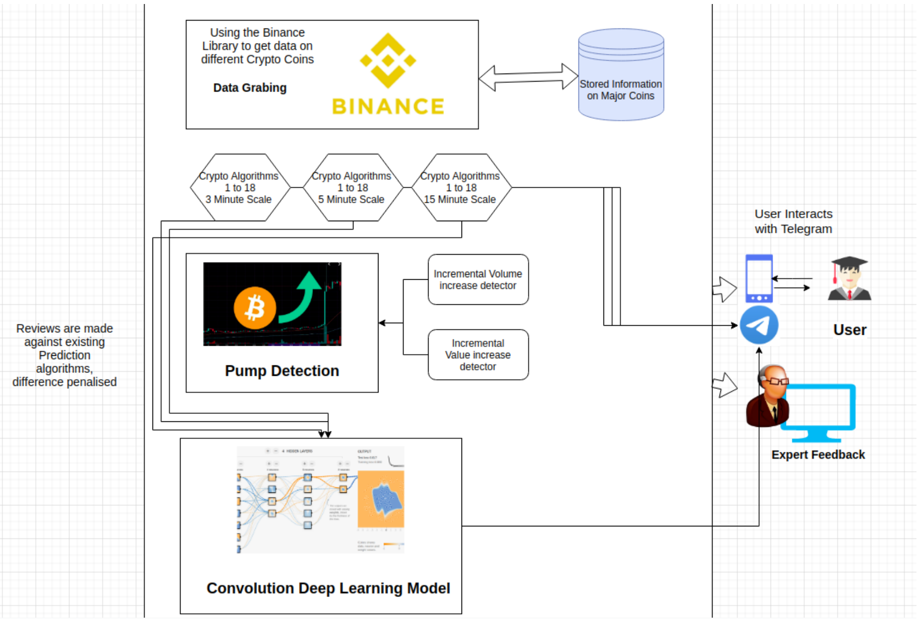
Using the Binance Library to get data on different Crypto Coins
Data Grabing
BINANCE
Stored Information on Major Coins
Crypto Algorithms 1 to 18 3 Minute Scale
Crypto Algorithms 1 to 18 5 Minute Scale
Crypto Algorithms 1 to 18 15 Minute Scale
User Interacts with Telegram
Incremental Volume increase detector
Pump Detection
Incremental Value increase detector
User
Reviews are made against existing Prediction algorithms, difference penalised
Expert Feedback
Convolution Deep Learning Model

Figure 1: UseCase Diagram

Sequence Diagram(s)

Design Rationale

The Project has been split into 3 ordered phases 1. Rule Based Algorithms - Comparison 2. Pump Detection by statiscal means 3. Machine Learning Models (Convolution Nets)

These 3 phases are ordered such because the results of one can feed features into the next stage of the pipeline.