K. N. Toosi University of Technology

Faculty of Physics
Educational Group of
Atomic-Molecular and Astronomy

Special Topics I Final Projects
(Project 4 - Bitcoin Price)

by

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Overview

One of the most important charts in the financial market is candlestick chart, which are widely used by experts in this market. To read more information about these types of charts, you can refer to this link.

In this project, we ask you to download the information of Bitcoin cryptocurrency in year 2023 and with one-hour time intervals, and design a model that receive the information of one or more previous candles, to predict whether the next candle will be *bearish* or *bullish*.

Note: You can get cryptocurrency data from sites like *CoinMarketCap* or *Yahoo! Finance*.

Important Points

Be sure to

- Leave appropriate comments for different parts of your code.

- Completely explain about the algorithm(s) you use to answer this question.

- Use **model selection**, **feature engineering** and **feature scaling** in your code.

- Measure your model performance using model evaluation metrics and interpret the obtained result(s).

- If you used a specific book or article in your project, mention it in your notebook.

A part of your score will be allocated to these items.

* You should write all the steps of your project in the **Jupyter notebook** and upload it as a file with the **.ipynb** extension on the vc site.