**Capstone Project in Data Science / Artificial Intelligence**

1. **To go to the training file:**

* Go to **trainedModel\_historical** folder, then **MetaTrader5**, then **mt5\_model.ipynb**
* Run the code in one of the following 3 ways:
  + 1. Run the python file, which outputs on the terminal.
  + 2. To use a notebook, run the code cell that starts after the ***Start running from here on remote*** section on the notebook.
  + 3. Alternatively, satisfy the following conditions in order to call the data API:
    - The **MT5 Terminal** desktop application must be installed
    - Register with the **MC Markets** broker and login on the MT5 Terminal with your details
    - Intergrate the code with your credentials.

**2. The following recommended material is for complete beginners to learn about the basics of FOREX trading**

- Trading, Investment and Portfolio Management: [click here](https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Trading%2C+Investment+and+Portfolio+Management+BY%3A+ERIK+PAULSON+VISHAL+K.+RATHI+HTAY+AUNG+WIN+Submitted%3A+February+2017&btnG=)

* PAULSON, E., RATHI, V.K., WIN, H.A., HAKIM, H. and RADZICKI, M.J., 2017. Trading, Investment and Portfolio Management (Doctoral dissertation, WORCESTER POLYTECHNIC INSTITUTE).

- Forex Basics Course

* Octa Broker. (2020). Forex Basics Course. Available at: [click here](https://www.youtube.com/playlist?list=PLwi9xUIQFHIwzGRYwdLpf35aKA29Zm3jW)

**Folder Structure**

* indicators/
  + This folder contains the files for the calculated indicators. More detailed information can be found in the folder.
* login\_info/
  + This folder contains login credentials for the demo trading accounts. *Real trading accounts' login credentials will be hosted in a separate private repository, for security, which will then be linked to this repository.*
* real\_time\_WebSocket/
  + This folder contains files for pulling real-time data using WebSockets in Python with the Tiingo API. More detailed information can be found in the folder.
* trainedModel\_historical/
  + This folder contains files for training models with historical data using various data sources. The MetaTrader5 is the main folder.:
    - MetaTrader5/
      * Main folder with the models used finally. Trained model(s) using the MT5 API.
        + *mt5\_model.ipynb*: **Main file** Contains all model training code.
        + *.keras*: are saved models.
        + *.txt*: are saved outputs.
    - Tiingo/
      * Trained model(s) using the Tiingo API.
    - yfinance/
      * Trained model(s) using the yfinance API.