Project Proposal Submission

- **Group Number** – 3
- **Group Name** – Tech Up
- **Group Members:**

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5. Zainab Aljohani

- **Project:** Stock Price Prediction – Machine Learning

- **What is your project?**

Our project aims to find out how we can predict stock price, as we know accurate prediction of stock market returns is a very challenging task due to depends on various factors including but not limited to geopolitics, global economy, company financial reports and performance, etc.

In this project, we chose machine learning by using Python, so we can work with historical data about the stock prices of a publicly listed company for example Apple, Google, Microsoft, and CSCO. We will implement a mix of machine learning algorithms to predict the future stock price of this company, starting with simple algorithms like averaging and linear regression, and then move on to advanced techniques like using the LSTM neural network.

- **What is required in order to complete a project?**

1. Get Trade Data from Yahoo Finance (Apple)
2. Data Exploration and Cleaning
3. Data Visualization
4. Splitting Data into a Training set and a Test set
5. Normalizing the Data
6. Build Machine Learning Model

7. Write and Run Backtest

- **Stretch Goals:**

1. Prediction of the market capitalization of Bitcoin and other cryptocurrencies.
2. Graphic user interface by using tkinter and dash.

- **Project Methodology:**

As a group, we decide to work together every day from 9:00 AM to 5:00 PM in (Zoom). This method helps us to be more effective, and commit to the deadline of project submission.

Our method of doing the project was to collect data. Each team member proposes names of companies, then we vote on which company we will work on it. Then we collected the quantitative data by using stock market data gathered from Yahoo finance. Finally, we decided on machine learning models that can look at the history of a sequence of data and correctly predict what the future elements of the sequence are going to be.

Our Suggested Ideas Related to The Blockchain:

1. Build Decentralized Exchange Using Hydro Protocol SDK.

2. Medical Record Management with Blockchain (Medical history of all patients).

3. Hire Employees with a Smart Contract (Can't be deleted or changed).

Note: These proposals we would like to work on in the future, but due to the lack of time to deliver the project, we could not choose them.