Proposed Project Plan

Conducted by:

Group 1

February 5, 2024

Table of Contents

1 Task B1: Setting Up the Environment

1.1 Goal

After finishing the setting environment stage, all team members should be able to install the required material on their computer. Also, the documentation should be provided so that everyone can follow the instruction.

GitHub Repository must be prepared and only team members and lecturer can access. The GitHub Repository will be published publicly at the end of the semester (April 12, 2024).

The documentation should be satisfied the requirements of Task B1 and will be uploaded to the GitHub Repo's Wiki.

1.2 Reponsibility and Due Date

Thanh Tam Vo will be the member who is responsible for this task.

Due Date: The Task must be finished by January 28th, 2024 (end of Week 4).

2 Task B2 and B3: Data Processing 1&2

2.1 Goal

At the end of this stage, the dataset should be loaded in an efficient way and all team members can understand the dataset via a visualization chart.

The documentation should be satisfied the requirements of Task B2 and B3 and will be uploaded to the GitHub Repo's Wiki.

2.2 Reponsibility and Due Date

Thanh Tam Vo and *Phuc Khai Hoan Cao* will be members who is responsible for this task.

Due Date: The Task must be finished by February 11th, 2024.

3 Task B4: Machine Learning 1

3.1 Goal

At the end of this stage, many DL Models should be applied into the training process. The team should process the training model with different hyper-parameter and findout the differences.

The documentation should be satisfied the requirements of Task B4 and will be uploaded to the GitHub Repo's Wiki.

3.2   Reponsibility and Due Date

Thanh Tam Vo and *Phuc Khai Hoan Cao* will be members who is responsible for this task:

- *Thanh Tam Vo* will perform training the model
- *Phuc Khai Hoan Cao* will be responsible for writing report

Due Date: The Task must be finished by February 25th, 2024 (end of Week 6).

4   Task B5: Machine Learning 2

4.1   Goal

At the end of this stage, the team should be able to solve more advanced prediction problems including multivariate prediction and multistep prediction.

The documentation should be satisfied the requirements of Task B5 and will be uploaded to the GitHub Repo's Wiki.

4.2   Reponsibility and Due Date

Thanh Tam Vo and *Phuc Khai Hoan Cao* will be members who is responsible for this task. They will collaborate to findout the solution.

Due Date: The Task must be finished by March 3rd, 2024 (end of Week 7).

5   Task B6: Machine Learning 6

5.1   Goal

At the end of this stage, multiple approaches should be applied in order to improve the prediction quality.

The documentation should be satisfied the requirements of Task B6 and will be uploaded to the GitHub Repo's Wiki.

5.2   Reponsibility and Due Date

Thanh Tam Vo will be responsible for this task.

Due Date: The Task must be finished by March 17th, 2024 (end of Week 9).

6 Task B7: Simple Extension beyond B1-6 and Independent Research

6.1 Goal

At the end of this stage, the model will predict the stock price based on other data types (political events, etc.)

The documentation should be satisfied the requirements of Task B7 and will be uploaded to the GitHub Repo's Wiki.

6.2 Reponsibility and Due Date

Thanh Tam Vo will be responsible for this task.

Due Date: The Task must be finished by April 7th, 2024 (end of Week 12).

7 Stock Price Prediction Website

The team plan to develop a simple website to show the predicted shared price of a stock ticker.

7.1 Front-End

The user interface should be friendly. *Tai Minh Huy Nguyen* will be the member who will be responsible for this task.

Note: Source code should be pushed to GitHub Repository for management.

Due Date:

- The proposed design should be finalized by January 28th, 2024 (end of Week 4).

- All basic functions of the website should be achieved by the of March 3rd, 2024 (end of Week 7)

7.2 Back-End and Intergrating the DL model

There will be a remote server to host the backend for the website. This server will handle all requests from users.

Responsibilty: *Thanh Tam Vo* and *Tai Minh Huy Nguyen* will be responsible for this task.

Due Date: The web server should be available by April 7th (end of Week 12).

8 GitHub Repository Link

Note: All GitHub Repositories will be stayed private until the end of the semester. Only team members and lecturer can only access these GitHub Repositories.

8.1 GitHub Repository for Project Documentation

Please visit this link

8.2 GitHub Repository for Front-End Website

Please visit this link