CSE/CPEG Final Year Project/Thesis

Monthly-Report Submission Guideline

Objective: To track the progress of the Final Year Project/Thesis (FYP/FYT).

- There are 3 monthly reports which account for **5%** of the final grade.
- There are 3 monthly reports due in the Fall, i.e. Oct, Nov and Dec/Jan. The monthly reports in Oct and Nov are due by 11:59pm on the last day of each month. The monthly report in Dec/Jan is due by 11:59pm on 15 Jan.
- We recommend the meetings with project advisor(s) to take place in the middle of the month in Oct, Nov and Dec.
- It is the responsibility of the student to submit the completed report to the FYPMS.

Monthly Report for CSE FYP/FYT

Project Code:	DL3	Supervisor(s):	Professor Dik-Lun LEE
Project Title:	A system for predicting stock price and offering financial advice		
Group Member(s) and Student ID(s):	Aadhar Agarwal (20386840), Luk Yin Chai, Leung Ka Wing (20341943), Jose Luis Amador Jaime (20391429)		
Reporting Period: • Scan report and submit via the FYPMS	Report #1 ☐ Oct Report #2 ☐ Nov Report #3 ☒ Dec/Jan		
Progress: • List the work completed in this reporting period. • Identify the major difficulties encountered. • Comment on the overall progress.	1. Significantly developed the frontend for user interaction with the program.. 2. Implemented risk calculation survey for the user to determine their risk aversion. 3. Implemented all the API calls that we will be using from external APIs such as alpha vantage. 4. Started implementing some of the endpoints for our API which will be used to query the database • Having done a lot of the groundwork in the previous months, the progress recently has been more focused on refining what was previously done. One issue caused by this is that a lot of the functionality of the ap is dependent on how the previous section works and processes its information. This was particularly frustrating when a modification would result in something like a change to the data structure used. • Overall progress of the FYP is good and looking like it will finish on time. A lot of the more time-consuming things like the web scraping and API implementation have already been accomplished. The work that is remaining is mostly basic arithmetic and the training of the models. One aspect that could take some time is the financial advice system.		
Future Plan: • Write down the working plan	1. Having created a single lstm model for all stocks, we now wish to create different models for each of the different indexes. This is because each of the different indexes includes different sectors and types of stocks with similar functions 2. In addition, we are also working on finalizing the pipeline for our projects and implementing all of the different modules we want to use. At the moment, the only modules that have not reached their basic functionality requirements are the risk analysis and advice-giving modules. After these modules have been created, we will focus on some of the more advanced options like sentiment analysis of twitter posts about the selected stock.		
Supervisor's Comments:	The group is progressing well, having implemented the software infrastructure, data downloading and some machine learning functions. As discussed, it is fine to work with a smaller number of stocks or stocks within one industrial sector to avoid spending too much time downloading data. It is important to have a functional prototype, then performance evaluation and fine-tuning can be done. Instead of sentiment analysis, you can consider feeding news keywords directly to your prediction module as input features. Risk analysis could be as simple as computing the RSI or Beta (or anyone you like) and then adjust your portfolio by balancing your risk factor with the predicted price, etc.		
Supervisor's Overall Evaluation:	(please circle) (letter grade) F D C- C C+ B- B B+ A- **A** A+		
Meeting Date & Time:	10th Jan 2021		
Group Representative's Signature:		Supervisor's Signature:	

(Version 2018-11-29)