

Team name: Team Capybara

Team members: Yu Chen, Zifei

Dong, Ning Pan, Sifan Tao, Yao Yao

Date: 02/24/2023

This journal has to be uploaded to 1) a **dropbox folder** (<https://www.dropbox.com/request/oMzqzRNvauGRuF97kiyh>). AND 2) posted to your project website every two weeks by 11:59 pm on the second Friday (except the spring break). When uploading to the dropbox folder, change the file name to "Team_Capybara _02-24-2023" where MM = month and DD= day of upload).

Team roles for this report (write down name):

Facilitator(s): Yu Chen

Recorder(s): Zifei Dong

Deliverer(s): Ning Pan

Planner(s): Sifan Tao, Yao Yao

See last page for description of roles. Obviously one person can take more than one role or there can be more than one person per role or make your own roles!

0. **Describe briefly what the main goal of your team is (so the peer reviewer has some context). E.g. we are working on image classification for blah de blah. Our goal is blah de blah etc. In the initial part of the semester before your proposal it is ok to put down "we are still coming up with ideas on team project".**

Currently we are still choosing the topic for thr project, we have several candidates:

1. We would like to use reinforcement learning to predict the stock trade and develop a stock price predictor. We are also open to other ML technics and may compare the outcome of different models. We would like to expect an accurate prediction with validation, and the model can predict future stock trends and prices as well.
2. Use RL on simple tasks like gamming bot

- I. **What was done during the report period regarding the project:** If you want to include code include this in the Appendix. Describe what the group did (including contributions of individual team members) with regards to the group project during this report period. Give enough details so I understand what you folks have been doing over the week. Include dates of your meeting(s) and who met on these days.

Meeting Date: Feb 18, all team members attended.

Feb 24, all team members attended.

Each team member looked up online for previous successful cases of stock prediction and explored possible dataset candidates. Looking for potential datasets.

We also discussed possible alternative project topic and ML method.

Created GitHub Repository and One Drive for coding and document share.

A brief intro to RL

Meeting up to a final decision on what goal we would like to achieve for this project. Since we briefly decided on stock price prediction during our initial discussion, this week we discussed the feasibility of implementing reinforcement learning on the stock price prediction.

- II. **What were obstacles faced if any in working on the project?** This could be technical (like not being able to implement or understand particular techniques) or time issues (midterms for other courses etc).

Due to insufficient experience with ML topics, we do need more time to explore the feasibility of different topics. We are also looking at other topics and spending time to make a final decision.

III. What is the plan for the next reporting period including what each team member is planning to work on. Describe goals and potential timelines (“ I plan to finish understanding x to see if it can be implemented for our project by Wednesday etc”.)

We are working on Project Proposal as a team. We are going to decide our final topic.

Yu Chen: A Project proposal for the team, find some intrest dataset, feasibility of learning RL, RL on stock price prediction and other models.

Zifei Dong: Explore different ML methods for stock price prediction and other interesting topics.

Jennifer Yao: gather a dataset that contains historical stock prices and other relevant information, such as news articles or economic indicators. Then preprocess it to extract the relevant features and transform it into a format suitable for reinforcement learning algorithms. We would work together on EDA and discuss several preliminary techniques that we would use.

Ning Pan: Finding several datasets for the stock price and comparing the advantages of each source. Research about which kinds of models could be applied on stock price prediction.

Sifan Tao: Looking for potential dataset regarding stock price and the market. Research about RL methods and other methods that may suit model prediction. Looking for and learning from the code examples posted online that research in similar direction.

While in the biweekly document above you will describe what your team did with regards to the team project (with proper attributions of who did what in the week) there are 4 pre-defined roles. I

urge you to have different people do these jobs every week so that you gain experience in each of the jobs. There can also be more than one person per job for example 2 people recording the weekly journal.

Facilitator: Manages the group for this week including setting up times for group members to meet, making sure everyone has a say in the meetings etc.

Recorder: Person in charge of recording the meetings as well as the happenings of the past two weeks and describing what was accomplished in the meeting and writing up this report.

Deliverer: Person in charge of checking the entire report and uploading the file to dropbox folder and project website, as well as the representative of the group getting in touch with the instructor.

Planner: Person in charge of what will be happening next two weeks as well as thinking about longer term goals (what more needs to be done for the project).

Team contact: Person I can email if I see any issues in the biweekly report instead of mass spamming everyone in the team.