

ECE 1786: Creative Applications of Natural Language Processing



Lecture 10

November 21, 2022

Agenda

Last Day:

- Summary of full generation process
- How to make model give answers that are wanted by humans: RLHF

Work-in-Flight: The Project!

Today:

- Course logistics and Deliverables
- Open time to discuss/consult on projects






Project Timeline and Deliverables

Date	Item
03-Oct	Project Discussion in Class
10-Oct	Team Forming Deadline – 38 teams received; only 73 A2's
26-Oct	Approval-in-Principle/Uniqueness of Project Topic form
30-Oct	Project Proposal Document Due
30-Oct	Project Proposal Slides Due
31-Oct/Nov 1	In-Class Proposal Present + Extra Class in Evening + WedEve
20-Nov	Progress Report Due
04-Dec	Final Presentation Slides Due
05-Dec/Dec 6	Final Presentations + Extra Class in Evening + Next Eve
8-Dec	Peer Review Due
12-Dec	Final Report Due



See Quercus for Details Presented Today

	Final Presentation Slides Not available until Nov 20 at 7:00pm Due Dec 4 at 6pm -/10 pts
	Peer Review of Another Group's Final Presentation Not available until Nov 20 at 6:00pm Due Dec 8 at 6pm -/5 pts
	Final Report Not available until Nov 20 at 7:00pm Due Dec 12 at 6pm -/20 pts

Progress Report



Progress Report

- All reports received in good order last night
 - Great to see the progress and the work done so far!
- will review them as quickly as possible
 - provide feedback to be helpful with your projects
- Will release as they are graded, not wait till all done

- Looking at Github repositories, almost all were active
 - **it was a requirement that you show activity there for this report**
 - It **is** a requirement that use the repo, and it should show continuous activity, not just one or two pushes.



Final Presentations

Slides Due December 4 at 6pm
Presentations On December 5/6, 2023



Note: Extra Hours for Final Presentation

- Three sessions for the Final Presentations two extra
 - Session 1: Tuesday December 5, GB 221, 10am-12pm (usual)
 - Session 2: Tuesday December 5, GB 221, 6-9pm
 - Session 3: Wednesday December 6, GB 220, 6-9pm
- You will present during one of these sessions
- You will be do a peer review in the other session
 - want everyone to see lots of presentations
- As before, let me know of any hard constraints that prevent you from attending Session 1, 2 or 3
- You must inform me by Friday December 1
 - I will not change schedule if you wait till after that to tell me
 - But do it **now** if you know now.



Final Presentations

■ Maximum 6 Minutes

- More time than proposal!

■ Must Be Self-Contained

- Meaning: assume audience has **no** prior knowledge of project
- the presentation must stand alone

■ Who is the audience?

- This class, TAs, Instructor
- **And** if you publish the video: Your future employer, Your friends, family



Video Recordings

- **We will record the final presentations**
 - Will be edited into separate videos, with slides inserted
- You will have the choice as to whether recordings will be posted publicly or not.
 - Both members of the group must agree to posting
 - Similarly for the final report and the software repository
 - See “Project Pages” link from last year’s course:
 - <https://www.eecg.utoronto.ca/~jayar/ece1786.2022/>



Required Content of Final Presentation

1. Goal & Motivation: What & Why

- Third time, keep improving this!

2. Data and Data Processing:

- What data did you use or collect?
- What does it look like?
- What data processing did you do and why?
- Was there any unusual issues with the data?

3. Model and Software:

- Describe the model(s) and/or system architecture you built and tested
- Were there any issues in training?
- Describe any other software needed.



Required Content of Final Presentation

4. Quantitative and Qualitative Results:

- Describe first how you determined if you succeeded or not
- Discuss and interpret your results
- Qualitative results show & discuss specific data examples

5. Discussion and Learnings:

- Do your results make sense intuitively, or were the results surprising in some way?

6. Reflect: What would you do differently in a similar project, based on your experience in this project?



Peer Review of Final Presentation



Peer Review

You'll be assigned to a group during different session (1,2 or 3) from your presentation:

Answer these questions:

1. State the goal of the project in your own words.
2. Say what was the most interesting & why.
3. Give one suggestion to improve their final report
4. Provide feedback on the quality of the oral presentation

■ 300 words, due **Friday December 8 at 6pm**, 20% penalty if late



Final Report

Due December 12, 2023



Final Report

- A summary of the project
- Describes what you have done and why, what your results are, and an interpretation of your results.
- Word limit 2000 words
- 1% penalty for every word in excess of the 2000 limit.
- You must count the words in your document, compute the penalty, and put it on the front page.
 - If count is missing, a grade will be deducted



Submission of Report and Software

- Submit final report as a group on Quercus to the 'Final Report' assignment
 - due **Tuesday December 12th**, at 6pm.
- Commit your final source code to your course Master GitHub repository by that same time. There should be no commits to the Master branch after the deadline.
- Usual 1 hour grace period/20% penalty up to 24 hours late, 100% penalty after that



Permissions

On a Separate Page, at the end of report:

- Each member of the group must indicate if they will grant or deny permission to post the project on public website
- Both members of the group must say yes for each permission to be granted. (i.e. each member has a veto)
- You can also wait to see the video before deciding
- Table not included in the word count

Team Member	Post Video?	Post Final Report?	Post Source Code?
Person 1	Yes/No/Wait till see	Yes/No	Yes/No
Person 2	Yes/No/Wait till see	Yes/No	Yes/No



Final Report – Also See Doc On Quercus

1. Introduction (2 points)

- A brief description of the goal and motivation of the project. This should include why the goal is interesting or important.

2. Illustration / Figure (2 points)

- A figure or a diagram that illustrates the overall model or idea of your project. The idea is to make your report more accessible, especially to readers who are starting by skimming your work. You are graded on the design and illustrative power.

3. Background & Related Work (2 points)

- A description of 1-2 related works in the field, to provide reader a sense of what has already been done in this area, e.g. papers or existing products/software that do a related thing.



Document Sections, cont'd

4. Data and Data Processing (4 points)

- Describe the data that you collected, how you collected it, and how you cleaned it. Show some statistics and examples of your data.

5. Architecture and Software (4 points)

- A description of the model or overall software. Present only the model (or models) whose quantitative results you will show, or a clear description of the structure of the software. This can refer to the illustration show in part 2.

6. Baseline Model or Comparison (2 points)

- If you chose to make a baseline, describe it. If you didn't have a baseline, you'll need to describe how you measured success carefully.



Document Sections, cont'd

7. Quantitative Results (4 points)

- A description of the quantitative measures of your result and why it is appropriate. What measurements can you use to illustrate how your model and software performs?

8. Qualitative Results (4 points)

- Include some sample inputs and outputs of your model/software that illustrate when the model is working well and when it is not. The qualitative results should also put your quantitative results into context (e.g. Why did your model perform well? Is there a type of input that the model does not do well on?)

9. Discussion and Learnings (4 points)

- Discuss your results. Do you think your model is performing well? Why or why not? What is unusual, surprising, or interesting about your results? What did you learn, and what would you do differently when starting another, similar project?



Document Sections, cont'd

10. Individual Contributions (10 points)

- Each partner should write a description of what their contribution to the project. This must contain specific details such as:
 - collected dataset X
 - hand labelled X data samples
 - was responsible for the training of the baseline software
 - wrote the gradio implementation of the user-facing side of the project
- just a few examples, there are many other possible activities!

■ **The project Github repository should show commit activity that aligns with the work stated.**

- Do not leave the commits to just one person



Two Other Aspects of Final Report Grade

For your information (does not require anything to be written in report)



Project Difficulty/Quality (4 points)

- A measure of how "difficult" the project is, and how good your results are given the difficulty of your problem. If your problem is more difficult than what one might expect, you should clearly articulate why in the body of your report.
- There are a variety of ways to increase your project complexity, even after the fact. For example:
 - Try multiple approaches
 - Expand the scope of the project
 - Explore and expand your results.
 - Explore how to make your model smaller/faster



Structure, Grammar & Mechanics (8 points)

- The document should be easy to understand, be grammatically correct and well-written.



Questions?



Project Consultations



Please Contact TAs for Help

- You've been assigned a Mentor, per Oct 29 announce
- TAs are available from now through December 6 for help
- Contact them directly to make zoom or in-person meetings, or ask questions by email:
 - Mohamed Abdelwahab - mo.abdelwahab@mail.utoronto.ca
 - Jiading Zhu - jiading.zhu@mail.utoronto.ca
- Can also contact me: Jonathan.Rose@utoronto.ca



In Class Consultation

- Today
- Next Week's Lecture: only consultation, no formal lecture.
- Here today: myself, Mohamed and Jiading

