

Instructions

- GPT link for some good starting points

<https://chatgpt.com/share/67eb0c57-88f4-800b-b022-75d751b1ce2c>

Project Instructions

Overview

The purpose of the course project is for you to gain some experience working on an artificial intelligence problem of your choice. This description is intentionally very broad. Though, the project needs to be related to foundation models like text or vision or multimodal models.

You are expected to perform the following tasks.

- Choose a topic in an area of Artificial Intelligence.
- Identify a specific problem in your chosen topic.
- Summarize a few recent papers and applications that tackled your problem of interest.
- Identify a question related to your problem of interest and form a plan to answer the question by implementing a program.
- Implement the program and produce results.
- Discuss your findings and future directions.

There are a number of deliverables for the project. See below for details.

Deliverable Instructions

Proposal

For the proposal, you must complete the following tasks.

- If working as a pair, find your project partner.
- Choose a project topic, and review a number of papers and applications on the topic. Please cite at least 5-7 papers and applications. See section 4 for some tips on finding a project topic.
- Complete the Introduction, Related Work, and Methodology sections of the project report.
- Use MS Word with Times New Roman font style and 12 as font size.

What to submit:

Submit your PDF file named FirstName_LastName_proposal.pdf or FirstName1_LastName1_FirstName2_LastName2_proposal.pdf or FirstName1_LastName1_FirstName2_LastName2_FirstName3_LastName3_proposal.pdf (if working with a project partner-**maximum group size is 3**) to the [project repository on GitHub Classroom](#)

[Links to an external site..](#)

Due date:

Submit by the end of the day on **April 7, 2025**.

Final Report

For the final report, you must complete the following tasks.

- Complete the implementation.
- Complete the project report. Your final report should contain Abstract, Introduction, Related Work, Methodology, Results, Discussion, Conclusion and References sections.
- Make a presentation.

What to submit:

1. Submit your PDF file named FirstName_LastName_final_report.pdf or FirstName1_LastName1_FirstName2_LastName2_final_report.pdf (if working with a project partner) and to the [project repository on GitHub Classroom](#)
1. [Links to an external site..](#)
2. Submit your link to project repository on GitHub Classroom to Canvas.

Due date:

1. Submit your presentation by the end of the day on **May 4, 2025**.
2. Submit your report and code by **12:30 PM** on **May 5, 2025**.

Make a Presentation

Create a presentation for your project.

Format

- Time length: 10-15 minutes
- If working with a partner, each partner should show up and participate.
- Don't think of this as a dull academic presentation. Instead, imagine you are a popular tech making a TEDx presentation about a cool AI project.
- Take advantage of any visual that helps demonstrate your work.

Recommended structure

- Introduction (2-3 minutes)
 - What is the problem tackled?
 - Motivation

- Method (2-3 minute)
 - Explain the proposed solution at a high level. Do not go into details of the algorithm.
- Result (the core of the presentation)
 - Interesting challenges in your implementations
 - Walk us through how to run your program and showcase the result.
 - For data science projects, present findings from your dataset
 - Performance analysis
 - Anything else interesting you want to share.

Tips

- Please do not just pick several sentences from your report and read them out. Oral communication is very different from written communication.
- This is also not a summary of your report. Unlike the report, you don't need to go into the details of the algorithm. In this presentation, you should focus on what you accomplished and try to "sell" your model. Be creative and tell interesting stories.
- Demo your model in different scenarios. For example, if you are building a sentiment analysis tool, you should probably show us how your model behaves when the input is a positive sentence and when the input is a negative sentence.
- Your presentation should be self-contained for people who haven't read your report.

Tips on finding a project topic

It is likely that you do not have a lot of experience working on a project on artificial intelligence. You might feel anxious and overwhelmed about finding a project topic. Don't worry! Here are a few suggestions on how you could get started.

- Examine your daily lives. Perhaps, a problem that frustrates you will end up becoming a project topic worth exploring.
- Look through the latest developed applications in the suggested list on [Canvas Announcement](#).

Aim to find a topic that you are curious or passionate about. This will motivate you to put in effort into the project and get the most out of it.

Look at what is happening around you

Artificial Intelligence is becoming ubiquitous in our daily lives. If you encounter a problem in your everyday life, chances are that we can apply an artificial intelligence algorithm to solve it.

To find a project topic, think about problems that you encounter in your daily lives. Perhaps, you can do a project on it. Alternatively, think about recent news articles that you have read. Does any emerging technology catch your eye? You can possibly find a related project topic as well.

Look through web

Search through the HuggingFace, LangChain and GitHub pages for latest featured applications.

[Links to an external site.](#)

Submit your presentation file (using a similar name convention) to the [project repository on GitHub Classroom](#)

[Links to an external site.](#)

Submit your code to the [project repository on GitHub Classroom](#)