

L4: Introduction to the Course Project

EECE 571N | Sequential Decision Making | Fall 2025

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Overview of course project

The course project will allow students to explore an application or extension of course concepts in depth, and **aims to prepare students to complete related independent research projects**. The project will be completed in **teams of up to 2–3 students** and include a short proposal (graded and required for approval by the course instructor), a midterm progress update, and a final written report and in-class presentation.

Project proposals

- Due September 24th
- 5% of final course grade

Project updates

- Due October 29th
- 5% of final course grade

Project presentations

- December 1st and 3rd
- 10% of final course grade

Project reports

- December 5th
- 30% of final course grade

Individual contributions/Teammate score

- Evaluated through self and peer assessment via weekly Canvas surveys. These surveys will take place after lecture every Wednesday and carry a participation grade of 5%.
- 10% of final course grade.

Project proposals

A mandatory 2-3 page document outlining:

- the project motivation,
- related work,
- planned approach,
- milestones, division of labor, and timeline.



The goal of the project proposal is to give you experience in picking a problem, conducting a preliminary literature search, planning a project proposal, and writing a clear proposal document.

The better you can articulate the core challenge(s) that your project will solve at the proposal stage of the project, the more focused and efficient your work will become!

A template with detailed instructions and a grading rubric is provided on the course Canvas.

Project updates

A mandatory 2-3 page document outlining:

- the project motivation,
- related work,
- planned approach,
- milestones, division of labor, and timeline.



The goal of the progress report is to provide an opportunity for you to reflect on your progress, to open discussions with me about any challenges faced and/or potential issues around project feasibility, and to make adjustments to the project's plan.

A template with detailed instructions and a grading rubric is provided on the course Canvas.

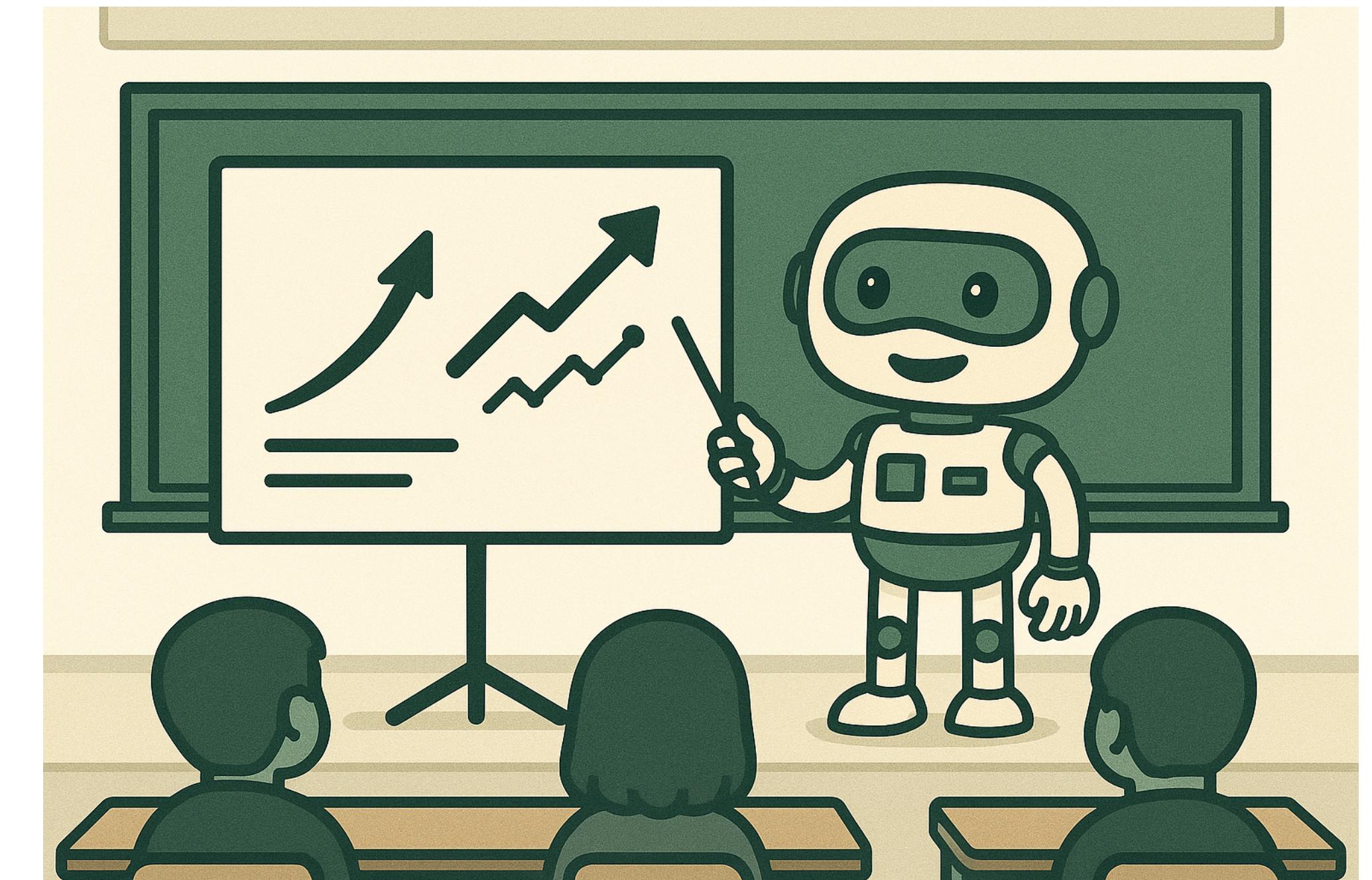
Project presentations

A 10-minute presentation including:

- Motivation and problem statement,
- A brief description of related work and background,
- The project methodology,
- A description of experiments and main results,
- A discussion on the project's findings, limitations, and directions for future research.

The goal of the presentation is to give everyone the opportunity to share their work with each other, as well as to gain **valuable experience in research communication.**

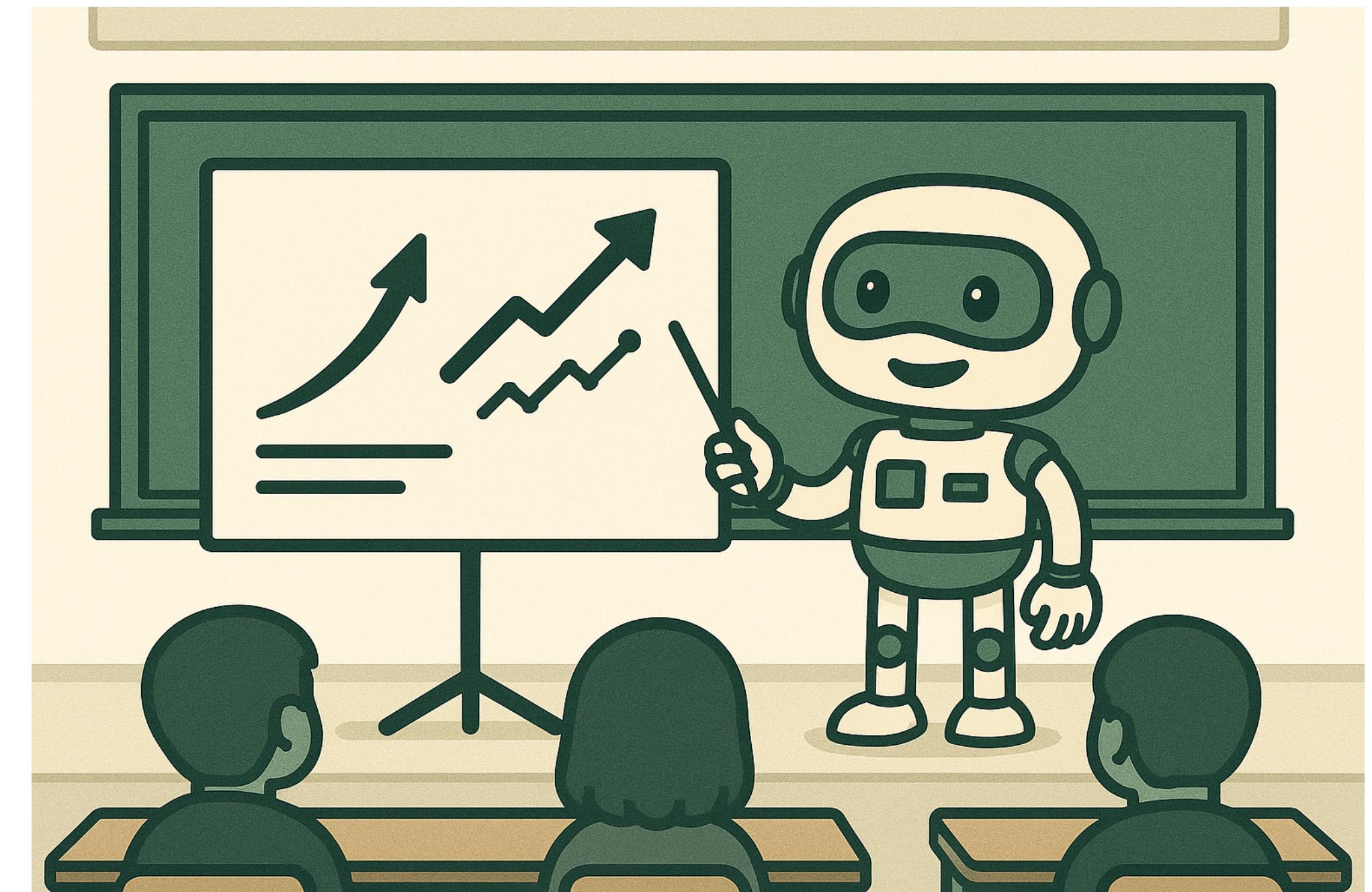
Instructions and grading rubric are available on the course Canvas.



Grading of project presentations

- Presentation quality: Is the presentation clear and easy to follow? Are the visuals easy to understand? Is the presentation engaging?
- Are the problem motivation, methods, and experimental procedures clearly described?
- Is there a good logical flow throughout the presentation from methods to results?
- Did the presenters effectively use visuals? i.e., did they present diagrams, flowcharts, figures, and other illustrations instead of walls of text?
- Was the delivery professional? Did the presenters answer questions in a professional manner?
- Was the presentation well-paced and did it finish on time?

Instructions and grading rubric are available on the course Canvas.



Project report

A 10-page research-paper-style project report, including:

- An introduction,
- A related works section,
- A section on project methodology,
- Project experiments and results,
- Discussion of results and limitations,
- Conclusions and future work.

The goal of the report is to give everyone the opportunity to gain **valuable experience in writing academic research papers**, and more generally in technical written communication.

Detailed instructions, a report template, and a grading rubric are available on the course Canvas.



Grading of project reports

- (5%) **Abstract** Does the abstract provide a concise and clear summary of motivation, methods, and results?
- (20%) **Introduction** Does the introduction provide a clear statement of the problem setup and why it matters? Does the introduction clearly outline high-level methodology, contribution, and results?
- (5%) **Related Work** Does the related work section sufficiently discuss related areas of research, with several paper references per area? Is the relationship between each such area of research and this project clearly described?
- (15%) **Methodology** Is the methodology clearly, precisely, and concisely described?
- (15%) **Experiments and Results** Are the project's experimental procedures well laid-out and clearly defined? Are the project's experiments designed in a way that highlights and tests the core contributions of the proposed methodology? Are the main messages and claims clearly described and well-articulated?
- (5%) **Discussion and Limitations** Does the report give an honest discussion of the strengths and weaknesses of the proposed approach?
- (5%) **Conclusions and Future Work** Is the report well-concluded with a brief summary of the work, challenges overcome, and main results?
- (5%) **References** Are the references included with self-consistent formatting?
- (25%) **Overall quality of writing and presentation** Is the paper clearly written and precise? Are the figures well presented with legible axes, colors, and styles? Is the report engaging to read?



Instructions and grading rubric are available on the course Canvas.

Where to begin?

Implementation of an existing algorithm for an impactful application area.

- What are the unique challenges associated with that application for modeling, solving, gathering data, running simulations, etc?

Extend an existing algorithm or framework for sequential decision-making/RL.

- What happens if you change key hyperparameters of a specific method?
- What small improvements could be made on an existing method?

Solve a problem from your current research, or general research interests.

- How can course concepts be applied to high-level problems in a field you are interested in?

These are just ideas to help get you started.

If you would like feedback on ideas, find me after class for a brief chat.