

Final Projects

Your final class projects will be to extend, modify, or reengineer the models of decision making and/or learning described over the course of the semester. These projects can take multiple forms, including, but not limited to:

- Showing how a cognitive model and a neural model are linked across levels of analysis.
- Extending a cognitive or neural model beyond the scope described in class (e.g., an accumulator with more than two choices, an attractor model that learns over time).
- Testing a model in a novel context or task not described in class or the readings (e.g., Q-learning in volatile environments).
- Presenting a completely novel model at one level of analysis (e.g., a new accumulator model, a novel learning problem).

Project formats

The final project should be turned in as a Jupyter notebook. Use markdown text to elaborate on the conceptual content. Use code cells to present your results.

The final document should have the following content sections:

- Background
- Problem
- Model
- Results
- Conclusions & Interpretations

There is no length requirement for the notebook, but provide sufficient detail to describe the project to a lay person.

Project presentations

The final week of classes (before finals week) will be reserved for presentation of the final projects in class. Each project team (or individual) will get 15 min to present their work by walking through the notebook and answering questions.

Deadlines

- Oct. 10th, 2024: Presentation of project idea in class. 5 min.
- Oct. 31st, 2024: Outline of project idea submitted to instructors via Canvas. This is a brief write-up of the proposed project (500 words max, figures & equations are recommended).
- Dec. 3rd, & 5th, 2024: Final project presentations in class.
- Dec. 6th, 2024: Final Jupyter notebook of the project submitted to instructors.