Project Guidelines

General Guidelines

- The project is due April 20, 2025 at 11:59pm ET. No late submissions are accepted.
- The course project is an individual assignment only; no partners or groups are allowed. You must include citations for all outside sources.
- Pick a dataset and perform a Bayesian analysis of your choice on it. Here are some data source ideas: data you personally collected, from your lab or work, from a published paper, or from another internet source. Keep in mind Bayesian inference can really shine in situations with little data, so you don't need anything too large! That said, if you're interested in exploring Bayesian analysis of large datasets, don't let us stop you! The project is very open-ended.
- Make sure to credit the source of data or include a citation of it in your report. If the data are coming from a published paper, references should be provided. If the data file is small ($\leq$ 10mb) and not sensitive, feel free to include it. Otherwise, you may exclude it from your project submission.

Project Deliverables

Including the data with your submission is optional. There are two required deliverables which will be uploaded to Canvas:

1. A **pdf or html write-up of your project** similar to the homework is required. You are free to create this in LaTeX, MS Word or whichever other editor you like. There is no specific page requirement, but 4-7 page projects are fairly common.
2. **Any code files related to your project.** You can use any programming language to create these, but keep in mind they should be well-formatted and human-readable.

Example Projects

- There are sample projects available in this Ed Discussion thread.
- You may reference the Unit 10 lectures in the course, where Brani discusses and analyzes several different case studies using Bayesian methods. These also serve as examples of good project topics.
- You are of course not limited to these. Any type of Bayesian analysis can serve as inspiration for this project. Please choose data and a topic that are interesting to you.

Grading and Evaluation

The project is evaluated from 0 to 100 points. Creativity and originality are factors in high scores on the project. Typically the following rough guidelines are used:

- **100 points:** Highly original work with good motivation and results clearly presented. Explores deeper into a subject only touched on in class, or even something entirely outside the class.
- **90 - 95 points:** Good project applying ideas from the class in new ways to perform an analysis. Simpler than the above but the analysis is correct and results clearly presented.
- **80 - 90 points:** Very basic short project and/or there are errors in approach, techniques, or conclusions.
- **50 - 79 points:** Significant issues with presentation, approach, techniques, or conclusions.
- **50 points or lower:** There is nothing Bayesian in the project.