PROJECT 1: VALUES AUDIT
DSCI 451
Fall 2025

A major focus of this course is analyzing the ways that values, assumptions, and other underlying commitments become implicitly codified into the implementation of data science systems. This project provides you an opportunity to apply those analytic skills.

For Project 1, you will **conduct a values audit** of a machine learning research project. You will have access to a published research paper describing the project, as well as the dataset used for the project. Based on the paper, you will **identify and analyze the values behind key decisions** in project. That is, you should:

1) Identify key decisions that the researchers made. You can consider decisions at all stages of the data science process—problem/task definition, creation of the dataset, data cleaning, analysis, evaluation, and reporting. Choose **3-4 decisions** that you think are highly impactful.
2) For **each** of these major decisions, name a **value** that guided the decision. Explain why you think the authors hold that value, using evidence from the paper. Some values may be stated explicitly, but in other cases you will have to infer them.
3) For **each** of these major decisions, you should also analyze the ways that the decision plays out, i.e., **how that value shapes the analysis** and ultimately the outcomes.
4) For **one** of these major decisions, you will then **implement an alternative**. That is, select a different value that could have guided the data analyst and show how this alternative value leads to a different decision. (Remember the exercise we did on value trade-offs.) Then, implement that alternative decision in an R notebook or a Jupyter notebook (your choice), using the provided dataset. In your values audit document, explain what you did, why, and how it affected the outcomes of the project.

DELIVERABLES

Students should submit **two separate files**:

1) a .pdf file of your values audit (roughly 600-1000 words, excluding citations)
2) a .html file (exported from your R or Python notebook) showing how you implemented an alternative value.

A NOTE ON COLLABORATION AND ASSISTANCE

This is an individual assignment. That means that you should work independently, not in pairs or groups. If you need assistance with Python or R coding, you are allowed to consult friends or AI as long as you acknowledge the assistance you received. (Put a note at the end of your submission saying who helped you or what AI tool you used, and for what tasks.) However, **you may not get help from friends or AI on the values audit**. If you need guidance on this part of the project, **please ask the Professor or TA**.