

## STAT 547: Bayesian Workflow

### Final Project Guideline

For the project, you will apply the concepts learned in class to an open-ended question. The project can be the application of a probabilistic model to analyze data, the analysis of an existing method, or the development of a novel algorithm. You are welcomed to use the final project to advance your own research.

#### **Format**

The project report is due at the end of the course.

- The report should include an abstract.
- The report should be 4 pages long, with 11pt font and standard margins (1inch). This page count does not include figures, references or the appendix. (Note: I may not carefully read the appendix when grading the work.)
- You are encouraged to put your code online and open-source it. The paper can include a link to, for example, the relevant GitHub page. In your report, be sure to acknowledge software packages that you use.

#### **Evaluation**

The project is evaluated according to scope, significance and writing.

- *Scope:* The project is well-motivated and tackles an open-ended problem. It fits into an ambitious research program.
- *Significance:*
  - (excellent) The project would be seriously considered for a workshop or poster at a good conference. With additional work, it can be turned into a paper.
  - (very good) The project offers a significant milestone in a research effort and there is clear evidence that the project's idea should be further pursued. Alternatively, the project decisively concludes than an idea does not work and explains why.
  - (good) The project jumpstarts a research project, offering clear directions for further investigation and/or presents novel insights on an existing method or model.
  - (insufficient) The project does not offer much insight or progress towards resolving the motivating question, or even fails to formalize the question. Some of the results are technically incorrect, e.g., mathematical errors, wrong performance metrics. Below what is expected for a graduate-level course.
- *Writing:* The report is clearly written and the reader always understands where the paper is going. The figures are polished and intelligible. The report provides appropriate context, and it highlights limitations and future directions. The report is professional (no typos, accurate bibliography).