

CAPP 30254

Final Project Report

Due: June 4 for Graduating Seniors, June 11 for Others

The final project report should follow the format for a paper that you might submit to a conference. Your report should be no more than 10 single-spaced pages and contain the following sections:

1. Project Title and Team
 - Provide a title for your project
 - List all members of your team (full names and CNET IDs)
2. Executive Summary
3. Background and Overview of your Solution
 - What is the policy problem you are addressing and why is it important? Provide citations if relevant to support your claims of relevance (e.g. government requests for comments, white papers by policy organizations, etc.)
 - What is your solution to the problem? What will you be using machine learning for?
 - Who is the audience for your analysis? What kinds of actions could be taken based on your results, and who would be equipped to take those actions?
4. Data
 - Describe the data that you used. Be sure to specify what a row represents in your final dataset (your unit of analysis), and your outcome label (what you're predicting).
 - Include some descriptive statistics and/or visualizations of your data.
5. Machine Learning and Details of Solution
 - What type of machine learning problem is this? Are you developing a classification or regression technique? Clearly articulate the learning that your resulting models enable.
 - What types of models did you apply? Justify your choice of models. Your considerations could include the nature of your dataset (e.g. types and nature of features, size of the data), the requirements for model training or testing (e.g. real-time classification), or any other considerations you might have.
 - What features did you use to train your model? Did you use feature engineering to expand your feature set? If so, please justify.
6. Evaluation and Results
 - Describe and interpret your results. Include tables and plots where relevant to summarize your models (e.g. precision-recall curves).
 - Describe and justify the evaluation metrics that you chose.
 - Describe the feature importances of your best model(s).

7. Policy Recommendations

- Describe concrete policy recommendations that you would suggest as a result of your analysis (e.g. the set of entities identified that should receive your policy intervention).

8. Ethics

- Discuss the ethical implications of your work. Do you expect your models or analysis to suffer from any kind of bias? Will this potential bias impact the fairness of your proposed policy recommendations?
- Describe how you would go about evaluating potential bias in your machine learning models, although you do not need to formally conduct this auditing for your project.

9. Limitations, Caveats, Suggestions for Future Work

In addition to your report, please submit a link to your Github repository and any additional documentation. Your repository should be well-organized and contain a ReadMe.md file with instructions on the structure of the repository and instructions for running your code. All code should be well-documented.