

# DATA\*6200 Final Project

**Proposal Due: Thursday, November 10, 11:59pm**  
**Progress Presentations: Week of November 28, in-class**  
**Final Project Brief: Monday, December 12, 11:59pm**

Your final project will involve creating a dashboard using RShiny on a suitable data set of your choice, presenting your dashboard to the class in a 10-minute presentation during the last week of class, and submitting a 4-5 page project brief in which you describe the dashboard and its functionality as well as a brief explanation on some of your design choices.

You should aim to have a data set chosen by November 1st in order to ensure you have time to design and implement your dashboard in a timely fashion.

## Project Proposal

Your proposal need not be more than 2 typed pages (1 double-sided sheet or 2 single-sided sheets, no smaller than 11pt font) and should be separated into sections as follows:

- Abstract
- Introduction
- Motivation
- Design

The introduction and motivation may be combined, but should address the following:

1. Introduce your data, data source and the scientific problem you will look address. What variables will your data set contain and what types of variables are they? You may wish to include a series of "Questions of Interest" that one could use your dashboard to understand. Be sure to cite the source of your data.
2. Motivate your project by explaining why you chose this topic and/or data. Is it because there is a personal interest in the subject matter, or is there a specific data science task you are interested in working on that the data can facilitate? Why are you doing this project? (To pass the course is not acceptable as a reason here).
3. Explain how you intend to design your dashboard. What software or packages will you need? What types of graphics do you plan to create to address your questions of interest? What will be the challenge in completing the project/working with this data?

## Data Repositories

Here are some websites that you may find useful while seeking data (but you are not required to use one from this set of sites):

- <https://towardsdatascience.com/the-best-free-data-repositories-for-aspiring-data-scientists-in-2020-886d8785ebac>
- <https://www150.statcan.gc.ca/n1/en/type/data>

If you are having trouble finding an interesting dataset, please come talk to me **before** the deadline.

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## Grading of Proposal

Your proposal will be graded out of 5, based on the following, equally weighted criteria:

- Content - Does the proposal address the issues outlined on the guidelines? Is it well-written?
- Organization - Is the proposal separated into logical sections? Are the objectives and motivation clearly stated?
- Project objectives - Is the data interesting and the chosen approach reasonable for providing insights into the questions of interest? Level of difficulty comes into play here.

I know that it can be daunting to choose a data set or design a dashboard without having “covered” them in class yet, but if we wait that long the course will be over. Remember that the aim of the proposal is to demonstrate that you have thought about what you intend to do, within the context of the data set, and what is appropriate for the scientific problem being asked by the data, if you will. Finally, I hope this is a project you can have some fun with so choose a dataset on something that interests you, or explore a design or data tool that interests you and you’d like to learn about.

## Dashboard and Project brief

Your dashboard should provide, at minimum,

- Title, author, date
- Information on source of data, including statement on purpose of your dashboard
- Navigation bar
- At least one table and two data visualization types (of graphs/plots/charts)
- A precise and concise description of your key performance indicators

For your presentation, you need not provide any slides per se. Instead you should walk us through your dashboard, explaining what information/visuals are provided, how to navigate the dashboard, and explain some of your design elements (e.g. why you chose the indicators you did, colour or style choices, navigation style choice, etc.).

Your project proposal should be no longer than 5 pages. Assume a non-technical user/reader who is interested in using your dashboard. Specific project brief requirements include:

- Title page with course, name, etc.
- Maximum of 5 “sides” (5 single-sided or 2.5 double-sided pages) excluding title page, references, or appendices
- 11 or 12pt font and minimum of 1 inch border

Further, your project brief may have the following sections:

- Abstract to summarize key highlights or take-home message from dashboard
- Introduction to introduce data and purpose of dashboard
- Data to define the key performance indicators used in the dashboard. If some of your indicators are derived from the original raw data, then you should mathematically define them here (i.e. give a formula).
- Key Findings revealed by your dashboard
- Design Elements to briefly explain some of the key design choices you made in creating your dashboard

We may spend some time in class on this project, in which case I will let you know beforehand. At such times, try to come to class with an idea of which variables and summaries you may want to include in your dashboard, along with other design elements in mind as we progress through November.

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