DEPARTMENT OF STATISTICS, THE UNIVERSITY OF BRITISH COLUMBIA

STAT406 - Fall 2017 - Asssignment

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GENERAL DIRECTIONS

These are the guidelines and requirements for the assignment. They may be slightly adjusted to make them clearer, in which case the updated version will always be posted on the course's `Connect` page (in the same link where this document is), and the amendment will be announced by email, also via `Connect`.

- The assignment for the course is a **group project**.
- Groups **must have** 3, 4 or 5 members (**no other number** of members is acceptable). The expected scope, novelty and complexity of projects from 5-member groups will be higher.
- The assignment consists of delivering 3 short documents (see below for details) by each of the corresponding deadlines.
- All the UBC policies and procedures regarding **plagiarism** will be enforced. See the course `Connect` page for more details and information.

DUE DATES:

- Project **first proposal**: October 19th, IN PERSON, IN CLASS (no exceptions).

- Project **final proposal**: November 2nd, IN PERSON, IN CLASS (no exceptions).
- **Project**: November 30th, IN PERSON, IN CLASS (no exceptions).

DETAILS

The **goal** of the assignment is to have you work towards solving a realistic problem using some of the methods discussed in this course. Depending on the complexity of the problem on which you choose to work, you will be expected to provide a thorough or partial analysis and solution. This will be discussed with your group after you submit your *initial project proposal*.

You are free to work on a **problem of your choice**, as long as you can obtain all the required information (data, subject-matter background, etc.) in time to submit your proposal and completed project before each deadline. If you proceed with a problem and later find you cannot find all the required information you will lose points, without exception. **Do not commit** to a project before securing all the information needed to complete it.

You do not need to submit the **computer code** used in the preparation of each document, but it should be available upon request and on short notice (24 hours).

GRADING RUBRIC

This is what we will look for in each part of your assignment.

(1) Project **first** and **final** proposals:

- Full contact information for each group member: name (as listed in your UBC ID), student number, and UBC email address.
- Correct syntax and grammar.
- Clarity and thoroughness.
- Clear delineation and explanation of the question of interest. It should be accessible to any 4th-year UBC student (not in this course).
- Clear description of the data available for completing the project (location of the data, quality (completeness, etc.), format, size, etc.)
- Clear description of the expected difficulties and challenges.
- Clearly and correctly listed references and / or sources, that are also easily verifiable.
- Choice of problem: we will assess whether the novelty, difficulty and significance of the project are appropriate for a 4-th year university assignment, and for the number of members of your group.
- Compliance with all the required format guidelines (see below).

(2) **Project**:

- Same as the "Project **first** and **final** proposals" above, plus:
- Correctness and appropriateness of the analysis.
- Clarity, completeness and thoroughness of the presentation and analysis.
- Clarity and thoroughness of the conclusions, explained both technically and in layperson terms (for a subject-matter expert).

FORMAT REQUIREMENTS

The following are the format requirements for each of the deliverable documents.

- Number of pages:
  - Project **first** and **final proposals**: 1
  - **Project**: 5
- Pages should be one-sided and letter-sized.
- Hand-written documents **are not acceptable**.
- Minimum font size: 11pt.
- Single-spaced lines (no more than 5 lines per inch).
- Minimum margins: 3/4" all around.
- References should follow an accepted standard

  `http://pitt.libguides.com/citationhelp`
- **No additional pages** for plots, appendices, references, etc. It should all fit within the above page limit.

SUGGESTED STRUCTURE

A well-organized report will typically be structured using a few "Sections", as follows: (1) Introduction to the problem of interest (including subject matter background); (2) Data description (including challenges, limitations, etc.); (3) Methodology (to be used); (4) Analysis (a technical description of the actual work you did); and (5) Results and conclusion (where you discuss in layperson terms what you learned).

OTHER ISSUES

- You can apply any statistical learning method discussed in class. If you use any methodology that goes beyond this course you will need to describe it clearly and thoroughly, explain why you used it (instead of others we saw in the course), and provide appropriate references.
- Make sure your analysis provides an answer to the underlying question of interest.