Statistics for Data Science
Week 1 Live Session Plan

December 22, 2016

1. **What's statistics? What's this class?**
2. **Instructor Introduction**
3. **Student Introductions** Please take just 2 minutes to tell us a tiny bit about yourself.
   (a) Your job / career interest / reason you're learning data science
   (b) Something very few people know about you
4. **Polls**
   (a) How much experience do you have with Statistics?
   (b) What are you most apprehensive about in this class?
   (c) What's the most advanced math class you've taken?
5. **Weekly Workflow**
   A typical week of the course proceeds as follows:
   (a) Before live session: Watch all async content
   (b) In live session: We will build upon the async to test and extend your understanding
   (c) After live session: Complete the homework for the unit (due 24 hours before next live session)
6. **Homework**
   Homework is graded only with a check, check-minus, or a zero. We will generally not provide individual feedback on homework assignments. Instead, we will discuss the solutions in class and/or provide solution keys. It is your responsibility to check your work and bring your questions to office hours.
7. **How to Succeed in this Class**
   Here are some strategies we think will help.
   (a) Get to know your readings, especially the Devore and Wooldridge textbooks. (We may occasionally ask questions that you can only answer if you keep up with the readings)
   (b) Do the best job on the homework you can.

(c) Strategize about the homework exercises with friends as much as you want, but write the final proofs and final scripts by yourself. (However, note that you are not allowed to discusses quizzes or labs with anyone else unless otherwise specified)

(d) Form study groups!

(e) Attend office hours. You may attend the office hours of any live session instructor, and you may attend as many office hours as you like each week.

8. **Discussion Questions**
   Take 5 minutes to discuss these in breakouts, before our class-wide discussion.

   (a) Why do you need to know classical statistics, when we have fancy machine learning algorithms that can classify and predict with amazing accuracy?

   (b) Why isn't descriptive statistics enough for your career?

   (c) What mistake might result from confusing a sample mean for a population mean?

9. **Lab 1: Exploratory Data Analysis**
   Lab 1 will be distributed next week and due 24 hours before the week 4 live session. You are to work in teams of 2 or 3 to complete this lab. Please inform your instructor if you have prior experience in RMarkdown or Latex. Ideally, each team will have a member with experience in one of these languages.

10. **Reminders**
    Before next week:

    (a) Complete Unit 1 homework (due 24 hours before next live session).

    (b) Watch all unit 2 async content.