Introduction to data science

Patrick Shafto

Department of Math and Computer Science

Plan for today

- Review HW9
- Analysis
- HW for Wednesday

HW9

• Two examples...

Example of complete analysis

 http://nbviewer.jupyter.org/github/brianckeegan/ Bechdel/blob/master/Bechdel_test.ipynb

Think about the <u>rubric!</u>
Also think about cleaning / exploratory data analysis

| | Capstone 4 |
|---|---|
| Interpretation Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words) | Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events. |
| Representation Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words) | Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding. |
| Calculation | Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.) |
| Application / Analysis Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis | Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work. |
| Assumptions Ability to make and evaluate important assumptions in estimation, modeling, and data analysis | Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions. |
| Communication Expressing quantitative evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented, and contextualized) | Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, and explicates it with consistently high quality. |

• The Bechdel test (/bɛkdəl/ BEK-dəl) asks whether a work of fiction features at least two women who talk to each other about something other than a man. The requirement that the two women must be named is sometimes added.

• Syllabus recap!

Homework

Read the Bethel test and think about it!