CS 171 – Design Sprint

CS 171

At-A-Glance

What: A design sprint is a group project where, for several weeks, you go through the main steps of a visualization project: map, decide, sketch, prototype, and test.

When: Typically, you will work on the design sprint for the last 20-30 minutes of class during the first half of the semester. Some of the work can be done during the in-class activities, but some of it will have to be completed by your team as homework. Always finish the weekly phase of your design sprint by Sunday, just like regular homework.

Teams: We will randomly assign teams of 3-4 students early in the semester.

Mentor: We will randomly assign a TF mentor to each team.

Topic: We provide several datasets from which you can choose.

Design & Implementation: Mainly sketching and prototyping in Tableau.

Remote Collaboration Tool: We encourage collaboration with Google jamboard (https://jamboard.google.com/). Jamboard is a virtual whiteboard where you can create, move, and share digital sticky notes and sketches easily.

What to do

Here, we provide a high-level overview of what you will do in different weeks. Please go to the Modules on Canvas and look for more detailed instructions for every week. The tasks and deliverables may change from this document, so always follow the weekly descriptions in Canvas.

Week 1 to Week 7:
- You will see an assignment on Canvas, but you do not need to upload anything to Canvas. You will document your progress in a Google doc called the *process book*. The weekly Canvas assignment is acting as a reminder only.

In Week 1 you will:
- Create a Google doc, i.e., your process book.
- Share it with the right people. Make sure all your group members can edit it, and your TF can access it to leave feedback.
- Create and sign your team agreement form.
- Pick out the dataset you want to work on.

From Week 2 to Week 7:

- You will update your process book with the weekly assigned activities by 11:59 pm EDT on Sundays, just like homework.
- You will receive feedback and comments from your mentor directly in the shared Google doc. Based on the feedback you should revise your process book accordingly.

In Week 8, you will wrap up your project and submit it.

What to Submit

At the end of the design sprint, your team will submit the following items:
- **Process book**: a PDF file, generated from your Google doc, that documents every step and design decision of your design sprint.
- **Tableau Packaged Workbook (.twbx) file**: A package of files that includes your data source file, the Tableau workbook (.twb), and any other files used to produce the workbook (including images). Make sure you select *.twbx* when you save your file since we will not be able to grade .twb files. Please make sure both your Tableau **Dashboard and Storyline** are included in the submitted file.
- **Design Sprint Video**: A max. 2-minute screencast with narration that explains your project to a general audience by showing how a user would see and use your final Tableau Storyline. You can use any screencast tool of your choice. Please make sure that the sound quality of your video is good - it may be worthwhile to invest in an external USB microphone. Please use a standard video file format with a standard video codec.
- **Group Peer Assessment**: It is important to provide positive feedback to people who truly worked hard for the good of the team and to also make suggestions to those you perceived not to be working as effectively on team tasks. We will ask you to provide an honest assessment of the contributions of the members of your team, including yourself. Every team member needs to fill in a form for your peer assessments.

You will submit the final process book (PDF), your Tableau Workbook (.twbx), and a link to your video in a single zip file. The peer assessment form will be available on Canvas.

Grading Rubric

When grading the design sprint, we will ask your TF mentor and a second TF who was not directly involved with your team to evaluate the following properties:

- Completeness
  - Submission of all of the required files, including group peer assessment from each team member
  - TFs can read the process book and view the design sprint video
- Map
  - A clear description of the target audience
  - A list of at least 10 interesting initial questions
- Sketch
  - At least 3 sketches per team member of visualizations that answer the questions
  - Tableau visualizations and dashboards used for exploratory data analysis
  - Good storyboard sketch for your data story

- Decide
    - Sketches are sensibly clustered and named
    - The result of the group voting is documented
    - Your main message has been refined, justified, and finalized
- Prototype
    - Good use of Tableau features, such as calculated fields, trend lines, etc.
    - Screenshots of your Tableau visualizations, dashboards, and storylines before and after Test
- Dashboard
    - Tableau dashboard has clear title, subtitles, captions
    - Visualizations answer the group's main questions effectively and appropriately for the audience
    - Dashboard is well designed (e.g., whitespace, C.R.A.P., Gestalt principles)
- Data Story
    - Tableau storyline has clear title, subtitles, captions
    - Visualizations answer your main questions and insights appropriately for the audience
    - Visualizations and data story are well designed and effective
    - The data story has a clear hook, main message, and audience takeaways
    - Data story is well designed (e.g., whitespace, C.R.A.P., Gestalt principles)
- Test
    - Complete think-aloud study notes by your team, including the name and email of your test subject
    - The main findings and comments of your think-aloud study are well documented
    - List of ideas on how to improve your data story and visualizations to address the comments
    - Comments have been addressed in your re-design and final submission
- Process Book
    - Process book is complete and clearly documents the progress throughout the design sprint
- Design Sprint Video
    - The video can be viewed by the TFs and the maximum length is 2 minutes
    - The video has a spoken narration that presents your data story and interactive visualizations
    - The video and narration are appropriate for a general audience