Difficulty of Coding Projects (all projects are designed to be done within 1 week)

- **Hardest:** K-means Breast Cancer Analysis
- Twitter Sentiment Analysis (recommended to use as optional project)
- Mental Health Database
- **Easiest:** Hospital Database

Sample 20 day (~4 week, 40 min classes) curriculum timeline (Design Thinking Curriculum, Design Thinking Project, 2 Coding Projects)

- **Introduction and Design Thinking**
  - **Day 1**: Intro to CS+Social Good. Have students start to learn how tech can be used for good, and come up with some ideas. Expose them to prior examples.
  - **Day 2-3**: Design thinking crash course. This will create an overview for the *method* of the final project. At the end of the two days, introduce the interviewing assignment, which they will have two weeks for.
- **First Coding Project**
  - **Day 4-9: [Coding Project]:** Students will be spending class time on their coding projects. The first day can consist of introduction slides to the coding project, an overview of the assignment, and distributing the student assignment sheet. At the same time outside of class students should be conducting their interviews for the empathize part of their design thinking projects (as homework). These should not be too intensive it is just helpful to give them extra days given that this part of the project depends on the availability of those they are interviewing.
- **Design Thinking: Empathy Redux, Define, and Ideate**
  - **Day 10**: Define workshop. This will help students identify a specific problem from their interviews so their solutions can be targeted and effective.
  - **Day 11**: Ideation workshop. Students will come up with as many ideas as possible in 15 minutes (ideally ~50 ideas) and use the dot voting method to pick the best.
- **Final Project Conclusion**
  - **Day 12**: Paper prototyping workshop. This will allow students to sketch out what their solution for the design thinking project will look like, either on paper, or through electronic designs.
  - **Day 13**: Workday to complete presentations
  - **Day 14-15**: Final solution presentations by groups.
  - **Day 16**: Feedback from peers, those they interviewed, and teacher. Group discussion, pair-share, class discussion encouraged.
- **Second Coding Project**
  - **Day 17**: Present the introduction slides to the class, give an overview of the assignment, print student assignment sheet
  - **Day 18-20**: Three days for coding to complete chosen coding project. Students can work in pairs.

Sample 10-12 day (~2 week, 40 min classes) curriculum timeline (Design Thinking Curriculum, Design Thinking project and one Coding Project)

- **Introduction and Design Thinking**
    - **Day 1**: Intro to CS+Social Good. Have students start to learn how tech can be used for good, and come up with some ideas. Expose them to prior examples. Begin crash course (aim to finish the define step). This will create an overview for the *method* of the final project.
    - **Day 2**: Finish design thinking crash course. Students will carry out a mini in-class version of the design thinking process and be introduced to the methods they will use for their larger design thinking project. At the end of the two days, introduce the interviewing assignment, which they will have two weeks for.
- **Coding Project**
    - **Day 3-6:** [Coding Project] At the same time, student groups should be conducting their interviews for the empathize part of the project outside of class.
- **Design Thinking: Empathy Redux, Define, and Ideate**
    - **Day 7**: Define workshop. This will help students identify a specific problem from their interviews so their solutions can be targeted and effective.
    - **Day 8**: Ideation workshop. Students will come up with as many ideas as possible in 15 minutes (ideally ~50 ideas) and use the dot voting method to pick the best.
- **Final Project Conclusion**
    - ***Day 9 (optional)**: Paper prototyping workshop. This will allow students to sketch out what their solution for the design thinking project will look like, either on paper, or through electronic designs.*
    - ***Day 10 (optional)**: Workday to complete presentations for their solutions for the design thinking project.*
    - **Day 11-12**: Final solution presentations from student groups.

Sample 5 day (1 week, 40 min classes) 1 Coding Project

- **Choose one of the five coding projects**
    - **Day 1:** Present the introduction slides to the class, give an overview of the assignment, print student assignment sheet
    - **Day 2:** Work day
    - **Day 3:** Work day
    - **Day 4:** Work day
    - **Day 5:** Last work day
- **Repeat for 2 Coding Projects**

Sample 10 day (2 week, 40 min classes) curriculum timelines for Design Thinking Curriculum and Project Only

- **Introduction and Design Thinking**
    - **Day 1:** Overview of crash course + applications of design thinking
    - **Day 2:** Empathize Workshop + interview assignment
    - **Day 3:** Define Workshop. This will help students identify a specific problem from their interviews so their solutions can be targeted and effective.
    - **Day 4:** Ideation Workshop. Students will come up with as many ideas as possible in 15 minutes (ideally ~50 ideas) and use the dot voting method to pick the best.
    - **Day 5:** Prototype Lesson + create paper prototypes
    - **Day 6:** Get feedback on prototypes (test)
    - **Day 7:** Refine prototypes
    - **Day 8-10:** Final project presentations