**Introduction to the User-Centered Design Group Project**

**This topic of this course is the user-centered design (UCD) approach for designing user experiences, meaning user interactions and interfaces. Throughout the quarter, you will be working on a user-centered design project that gives you** an opportunity to apply what you learn from lectures, readings, and class discussions.

**UCD Project Approach and Phases**

In this multiple-step project, you and your team will go through key steps of user-centered design. Your outcomes and learnings from each step build upon each other. This iterative, team approach aligns with how technology companies generate user research insights and integrate them into the product development lifecycle. The project is divided into two main phases of research, formative and evaluative.

First, during formative research, you gain an understanding of a particular domain and its technology stakeholders. Each team will create user personas, user journey maps, and conduct a research study to inform and validate their understanding of the stakeholders.

Then, during the evaluative research phase, each team will design potential technology features for an existing or imagined technology product to support citizen science. Each team will conduct a usability study based on their technology prototype.

**Group Project Theme: Citizen Science**

**Diagram

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Image Source: Citizenscience.org

For this course, the domain is citizen science. Citizen science are collaborative efforts between scientists and volunteer community members. The scientists define the goals for the research, define the research methods and data analysis, and set up the research project. The scientists make end-user technology, such as mobile applications and websites, available to volunteer community members to collect and submit data.

For your project, you will choose a citizen science project to focus on and identify the technology that supports that project, focusing on end-user technology as opposed to backend technology. The instructor will approve each team's project topic. You will want to choose a topic area that will resonate with people you have access to in your life. So, choose something that people you know like to do, or you can image them doing.

See the “Overview of Citizen Science” document for a description of citizen science, technology used in citizen science projects, and resources that might be applicable to your project and may be sources of inspiration for your work. Remember that in any work you do, if prior work inspires or informs you, you must cite it appropriately.

Here are criteria for the technology you choose for your research and design activities:

1. Technology is interactive and has a comprehensive feature set (e.g., learning about the Citizen Science project, collecting data, submitting data)
2. Team has access to users (or potential users)
3. Technology must be in public domain (so team and teaching team can access)
4. Technology is a good showcase for your portfolio
5. Each team in the class must choose a different technology

**Creating a Technology Prototype for Usability Testing**

For your usability testing (during the evaluative research phase), you will need to have a prototype of a product that has citizen science functionality. You can either:

1. Base your prototype design on an existing product (e.g., a web site or application) that supports citizen science.

OR

2. Design your prototype from scratch. (It will most likely be informed by your secondary research on existing products and sites).

For either approach (1) or (2), you will need to have a prototype for your usability test participant to use to complete a few key tasks. You will observe and track usability issues, analyze your data, and make a final set of design recommendations and identify useful next steps for research.

**Project Activities**

There are multiple group assignments throughout the quarter so that the project moves steadily along. These assignments are designed to complete important deliverables for a design and research project. The group assignments include project checkpoints with the instructor and peer reviews of group work. The primary activities are:

1. Use online resources to gain an understanding of the domain
2. Build personas and user journey maps
3. Conduct formative user research (e.g., diary study, survey, interview) about users and context of use
4. Iterate on personas and user journey maps
5. Create an interactive prototype
6. Conduct a usability test of the prototype
7. Synthesizing your learning into a user experience portfolio and report

**Presentations and Demo**

There are two presentation milestones for this project. First, after we complete the formative research activities, your group will give a 12-minute presentation, followed by a 3-minute Q&A with the class. In this presentation, you will provide an executive summary review of the following: (1) your formative research methodology, (2) key findings from your research thus far; and (3) potential design directions for your prototype.

Second, at the end of the quarter, when we complete the evaluative research activities, your group will give a final presentation and demo of your prototype (total time is 12 minutes), followed by a 3-minute Q&A. In your final presentation, you will provide an executive summary review of the following: (1) your usability study method, (2) key findings from your usability study; and (3) prioritized design and feature recommendations.

**Research Report and Portfolio**

There are two report and portfolio milestones for this project. For each of the 2 milestones (formative and evaluative research), your team will submit a summary report of your research from that phase. In addition, you will individually submit a portfolio piece that is designed to be posted to your personal web site or online presence (e.g., GitHub). The purpose of the portfolio piece is to showcase your work to someone coming to your site - perhaps someone interviewing you for a job! Note that you do NOT have to actually post the portfolio piece online for the assignment.

Good luck with the project, use the strengths of your teammates, and have fun!