

SWEN 444 Human Centered Requirements and Design

Research Paper

Research Experience (100 pts) -- Done as a **PAIR**

The objective is see what industry and academia are doing to push the HCI envelope. Pick a topic, and research online and in the library to discover what innovations are underway for the user experience in terms of new hardware and software technology, and techniques for user interaction with new technology.

Each pair must have a unique topic **approved by the instructor**. The topic should be current (within the last 3 years). To limit scope it is recommended that you choose a particular product or service that represents a broader technology vector. For example, focus on a product or service that supports augmented reality not the entire field of AR. You are strongly encouraged to pick a topic related to **improving user accessibility**.

The sources must **primarily** be **scholarly sources**, marketing material does not count. There are great resources online from industry and from academia (research groups/labs). There are conferences such as ACM SIGCHI, ASSETS, CSCW to name a few. There are also journals from ACM that can be of value. Wikipedia and similar sources won't count as sources though they can help you find sources.

The content of the paper should be organized into two parts. The **first part** should be an **overview** sufficient to inform the reader about the historical background of the topic through its evolution to the current state-of-the-art.

In the **second part** analyze the **positive** and **negative user experience implications** for an expected or typical application(s) interface design of your topic. Reference in your analysis what we have discussed in class about how to achieve good UX design. For example, from a design perspective, what affordances are supported, what mental models and metaphors are represented, what design principles have been applied, and how well is universal usability accommodated? From a UX perspective, what are the usability implications, how useful will the application be in practice, and what are possible emotional impacts?

Your paper should be in the range of **six to ten** pages (quality over quantity). Be sure to include a list of **at least four sources** that you used for your topic. Use either the **ACM or APA research paper template**.

NOTE: You will be required to share an abstract, references, and a draft outline of your paper roughly halfway between the start of the assignment and the due date.

Grade rubric:

- Discussion of the topic (overview, relevant background, current state-of-the-art): 50 pts
- Your analysis of the user experience for an application of the new technology: 40 pts
- Good technical writing (e.g. grammar, spelling, style): 10 pts
 - Use of either the ACM or APA research paper template.
 - Legibility: lack of it will be a penalty, as it is important
 - Deductions for missing sources