

## CS-GY 6543 Human-Computer Interaction

### Assignment 2

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#### **A technology-mediated mental-health support system**

Our team, **Smiley**, has decided to focus on Goal 9: Good Health and Wellbeing from the UNDP's sustainable development goals. Although our idea is still not set in stone, we all have a general affinity towards developing a technology solution that aims to improve our users' mental health and well-being. More specifically, we derived inspiration from a mental-health support companion (Ooms, 2023), apps designed to reduce social media addiction (One Sec, 2023), virtual reality research to treat severe mental illnesses (Bell, 2020), and conversational agents to support group therapy (Yuksel, 2023), all of which were surveyed as part of the literature review done for Assignment 1. In addition, we are particularly interested in leveraging large-language models like ChatGPT to superpower our solution with exciting conversational capabilities. Given the vast scope of the problem space, we decided to use this assignment to narrow down our vision by identifying select personas we believe are in most need of such solutions. Namely, our personas are inspired by the experience of isolated remote workers, kids with digital media addictions, and people with severe mental illness.

**Persona 1: Isolated remote-work knowledge workers**

1. Name: Stephany Mendieta

2. Demographics

Age: 29 years old.

Gender: Female

Income: 80,000 dollars a year

Location: Ridgewood, Queens, New York.

3. Background

Job: Small Business Owner and Senior Digital Marketing Officer

Family: She is a daughter, older sister, and close relative to a large immigrant family spread across two countries (the US and Honduras)

Education: Bachelor's Degree in Communications

4. Affinities/Interests (A. hobbies, B. habits)

Hobbies: Thrifting, Styling, Partying

Habits: Active lifestyle and frequent city explorer.

5. Goals (What are their goals for the HCI product/experience/solution? What do they want/need from the HCI product/experience/solution?)

Stephany is currently in a moment in her life where she is laser-focused on many things

she loves. Whether it is rising the ranks in her corporate job through her relentless work ethic or channelling her passion for thrifting in her small business, twenty-four hours a day and seven days a week doesn't suffice for Stephany to achieve everything on her to-do list. As a result, Stephany finds it challenging to allocate time for hobbies and activities she enjoys and needs to decompress. This lack of time is further exacerbated by the fact that she works remotely from her home 80% of the time with two roommates, making it difficult for her to separate her work life from her personal life due to the limited space available. Stephany's goal is to find an HCI product/experience that can bring back balance in her life and encourages her to be laser-focused when she needs to be so that she knocks off items from her to-do list faster and more effectively and also helps her allocate time to spend time with her family, practice her hobbies, and just generally rest so that she can recharge batteries for the next day. Furthermore, she has experienced depression and anxiety due to how busy she is daily and would like to experiment with a technology-mediated solution that helps her manage those symptoms in between her cognitive behavioural therapy sessions.

6. Challenges (Why may it be hard for the HCI product/experience/solution to reach or engage or convert this person into a user?)

One of the problems Stephany might have in adopting a new product is her lack of time to learn how to use it. As we saw in Norman's *Design of Everyday Things*, it would be vital for Stephany that the product she uses has natural mappings and constraints that intuitively show her how the product will be used without much training (Norman, 2013). If indeed training is needed, such activity should occur only once. Given her nature, Stephany would also want to

employ Direct Manipulation as the primary mode of interaction with the product, as she dislikes being told what to do and enjoys exercising her agency on every product she owns (Schneiderman, 2016). In terms of the rules for interface design, we believe we would be appreciative of a product that abides by all 8 of them put forth by Schneiderman et al., especially the rules of “Keeping the users in control” and “Reducing short-term memory load”, the former due to her desire of being given agency by the products she uses and the latter due to her limited cognitive real estate due to all of the work she has to do.

7. Is there anything else we need to know about this "prospective user" to be able to create content they will engage with? A “day in the life” snapshot” could be good. Discuss how realistic, viable and targetable this persona is; what do you like and dislike (strategically thinking) about the persona for the HCI product/experience/solution?

A day in the life for Stephany looks as follows: She wakes up at 9 a.m. just in time for her morning standup meeting. She then works from 9 am until 2 pm, where she takes a break for her first meal of the day. She works from 2 pm until 5 pm and then takes a break to go to the gym. Given that her commute to the gym is 15 minutes, this may be a prime time for her to use our product, giving 30 minutes of usage daily. Furthermore, our design must account for the fact that she might be on the move, changing trains, etc, as she is using our product, which means that we might get sporadic bursts of full attention from her. After returning from the gym at around 7 p.m., she cooks dinner and then works until late in the evening (sometimes until very early in the morning) to finish whatever work she didn't finish throughout the work day. Her late-night work sessions might also be good opportunities for her to use our product, as she might need a break

from her work.

## **Persona 2: Younger kids addicted to digital media**

1. Name: Arun Shah

2. Demographic

Age: 19

Gender: Male

Income: 50000 INR per month

Location: Pune, India

3. Background

Job: Summer Software Engineer Intern

Family: Belongs to an Indian business(real estate) family.

Education: Pursuing Bachelors in Computer Engineering.

4. Affinities/Interests

Hobbies: Playing Blitz Chess, Reading Adventure Books, Playing Tennis

Habits: highly disorganised, uneven sleep schedule, highly performant when focused

5. Goals:

Arun is a highly ambitious person but finds it difficult to focus on the smaller details of his goals to effectively understand and tackle them. He has a good sense of the big picture but is

frustrated when he can't translate it on the ground. He is self-aware and has noticed that digital addictions are proving to be a major distraction in the life that he wants to live. He finds it extremely difficult to avoid exciting TV series and movies. This time suck is also causing him to miss out on a plethora of real-life experiences that he could have had. He really wants to change this. He is in dire need of an HCI-based product to help him avoid the digital media addictions in his life while also helping him translate thoughts into actions and expand the dimensions of his real-life experiences.

#### 6. Challenges:

It will be a tough challenge to bring such a high-performing, disorganised type-A personality to reduce their distraction to digital media. One of the major challenges in the subconscious will of a person that will never accept any modifications/alterations in their way of life as they don't want to be distracted. Their inflexibility makes getting a user's buy-in for the product challenging. Allowing the user to have good, flexible choices with the outcome and agency over the product journey would help, just like the principles set out by movements like DIY, where the user becomes part of the product-creation process.

#### 7. Day in the Life

7 am- Plays Tennis

9 am- 4 pm:- Internship work

4 pm-6 pm:- Talking with family, friends

6 pm-9 pm:- Digital media consumption

9 pm -11 pm:- Dinner and Sleep/ going out with friends.

Having an onboarding process that ensures a solid buy-in from the persona is essential to the product. What can we do so that using our product becomes a strong subconscious willful choice for the user? This is a guiding question we aim to answer throughout our design process.

### **Persona 3: People isolated due to severe mental illnesses or trauma**

1. Name: David Hao

2. Demographic

Age: 24

Gender: Male

Income: 0

Location: Haverstraw, NY

3. Background

Job: Unemployed

Family: He is the son of two Chinese Immigrants

Education: College Dropout

4. Affinities/Interests

Hobbies: Reading, Listening to Music, Playing Casual Video Games

Habits: Solemnly leaves his room, poor hygiene and eating habits

5. Goals:

David is an individual who has isolated himself from the outside world for several years, and has great difficulty leaving his room. When he is isolated in his room, the thoughts of what he has accomplished today and his past experiences bring forth a heavy sadness. While many

individuals seek solace in pets to improve mental health (*National Institutes of Health*), it is impossible for David to take care of one due to his confinement. David turns towards an HCI solution to provide an autonomous aid for his depression due to the low maintenance needs that would substitute for a living animal.

#### 6. Challenges:

Due to the isolation of the individual as well as the lack of income, the most likely the situation would be for the guardian of the individual to purchase the object, or for the user to find the product and request the guardian to buy the product. Based on how strained the relationship is, this may be difficult. Another issue with the process may be that if the guardian constantly seeks to purchase items for the individual, the product can be tossed aside by the potential consumer due to the nagging thus, the product must aim to be different from others in the market for consumers to give it a chance.

Additionally, due to the amount of time, the user would spend with the product, there is the worry that the individual can get bored of the limited functionality of the product or become annoyed with its constant pestering and eventually dispose of the product.

#### 7. Day in the Life

A day in David's life looks like this. At 2 pm, he wakes up and lies in bed for a few hours, playing games on his phone and scrolling through videos. At 4 pm., he goes to the door to bring in some cold food, which he eats. At 4:30 pm, he goes to his desk and starts his computer. Here, he consumes more media until he gets tired and returns to bed at 10 pm. On the bed, he scrolls through different media on his phone until he gets bored, sets aside his phone, lies in bed, stares at the ceiling, and thinks about things. Eventually, David drifts to sleep.



Our slides:

[https://docs.google.com/presentation/d/1R1gy4U8Ia\\_yrCqBMx5-sJ6bzqYIxrT1LmTeiKyanYk/edit#slide=id.g2883e7973fa\\_1\\_1](https://docs.google.com/presentation/d/1R1gy4U8Ia_yrCqBMx5-sJ6bzqYIxrT1LmTeiKyanYk/edit#slide=id.g2883e7973fa_1_1)

## References

Bell, I. H., Nicholas, J., Alvarez-Jimenez, M., Thompson, A., & Valmaggia, L. (2020). Virtual reality as a clinical tool in mental health research and practice. *Dialogues in Clinical Neuroscience*, 22(2), 169–177. <https://doi.org/10.31887/DCNS.2020.22.2/lvalmaggia>

Norman, D. A. (2013). *The Design of Everyday Things: Revised and Expanded Edition*. Basic Books.

*One sec | delay distracting apps and websites*. (n.d.). Retrieved October 11, 2023, from <https://one-sec.app/>

Ooms, S., Kolvenbag, J., & Bording, C. (2023). Lighting up Well-Being with Bulb. In *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery.

Shneiderman, B., Plaisant, C., Cohen, M. S., Jacobs, S., Elmqvist, N., & Diakopoulos, N. (2016). *Designing the user interface: strategies for effective human-computer interaction*. Pearson.

“The Power of Pets.” National Institutes of Health, U.S. Department of Health and Human Services, 26 July 2022, [newsinhealth.nih.gov/2018/02/power-pets#:~:text=Other%20studies%20have%20found%20that,animals%20might%20influence%20child%20development](https://newsinhealth.nih.gov/2018/02/power-pets#:~:text=Other%20studies%20have%20found%20that,animals%20might%20influence%20child%20development).

Yuksel, B., & Kocaballi, A. B. (2023). Conversational Agents to Support Couple Therapy. *Proceedings of the 34th Australian Conference on Human-Computer Interaction*, 291–297. <https://doi.org/10.1145/3572921.3572922>