

## Design Challenges

We offer three design challenges for you to choose from. Read the descriptions in detail and pick one to pursue. Traditionally students consider desktop or mobile apps as the mainstream software/hardware platform to build their prototypes. This year we offer the possibility to build your prototypes in metaverse.

### ***Design challenge I: All about music***

Beginning in 2003, streaming services are responsible for our daily consumption and discovery of music. The major players in this market are Spotify, SoundCloud, Apple Music, Pandora, and Amazon Music. Reportedly Spotify has about 286 million active users with a music library of 50 million songs. Yet many users complain that despite advanced recommender algorithms they have trouble experiencing good music beyond what they already know. The Spotify's discover weekly was dubbed "discover weakly". One main problem is perhaps recommender algorithms often favour the most popular pieces. The other complaint is that these platforms hardly associate our music needs with where we are, what we are doing, the current weather, and our current mood.

This challenge is to build a new interface for users to consume and discover music.

### ***Design challenge II: Change***

Bad habits are hard to change. Smoking, sedentary lifestyle, procrastination, over spending are some examples. Once these habits establish, it's hard to change them even when we want to. Sometimes we also need more information to make the informed decisions to change.

Can technology help people and communities change their behavior to meet their goals? Technology (computers, mobile phones, tablets...) can help by providing information and by reminding us. Furthermore, it can connect us with other users who are interested in the same change program. Change might mean exercising more, eating healthier, spending money wisely, helping make a more sustainable planet, or participating more actively in local government. How can we recognize when change needs to occur and determine the appropriate goals? What methods can be effective in triggering and maintaining change?

This challenge is to design an interactive product to facilitate personal or social behavior change.

### ***Design challenge III: Empower***

Assistive Technologies are design interventions to serve users that present different and often challenging needs. These users may have sensory difficulties like blindness or deafness, or they may have a physical condition that prevent them from speaking or a motoric impairment that preclude their operating devices in a traditional way (e.g., tremor or paralysis), or they may present one of myriad cognitive syndromes that make their lives a challenge. A huge opportunity exists to do good things by applying our design skills to these populations, all the way down to specific individuals, who present different needs and abilities.

This challenge is to create an Assistive Technology.