Generative AI (GenAI) disrupted the ways we do many of the technology related tasks, from software development to User Interface (UI) design.

UI design is largely controlled by User Experience (UX) and User Centered Design (UCD) principles and practices. UX and UCD have always been human endeavors since they involve analyzing many human factors such as cognition, human memory, language, culture and so on. But with GenAI coming into the picture, many of these tasks may be off-loaded to a GenAI model. Or at least, many of the tasks that UX practitioners undertake daily may be facilitated by GenAI.

We would like to compare several GenAI models, specifically Gemini (from Google), and Copilot (from MS) and assess their capabilities to generate different UX related artefacts, such as User Persona, User Flow Diagrams, Cognitive Task analysis, and designs related to Information Architecture and Information Design.

This analysis will provide valuable information on how GenAI can be used in creating UX-compliant UI and help us derive important guidelines for UX/UCD professionals on how to best use these new GenAI tools for their work.

This project will allow students to gain substantial experience on UX and UCD design processes and on the usage of GenAI tools effectively.

We will have the following phases in our project -

initial research phase to understand UX and UCD design principles and practices --> generate the UX and UCD artefacts for a specific website --> get familiar with GenAI prompt engineering --> generate the same human-generated artefacts using Gemini --> generate the same human-generated artefacts using MS Copilot using the same prompts --> Compare all three designs (human-generated and AI generated) based on UX attributes --> produce results.

**Google UX Design Professional Certificate**: <https://www.coursera.org/google-certificates/ux-design-certificate> (for SA)

**Google Prompting Essentials Specialization:** <https://www.coursera.org/specializations/prompting-essentials-google>

**Some questions**

Giving a scenario GenAI can generate many of the artefacts for UX - persona, survey, interview questions, user flow, user needs statements. But can it reverse engineer? Given a set of artefacts, can it derive what they are for? Can it analyze them to determine their quality?

**Testing prototypes**

* Pick 3 different domains and create designs for apps for them.
* Pick a meeting time based on student’s availability. Maybe next Wednesday ().

**Meeting:**

* Wednesdays at 9:30 am in person

**GenAI Models:**

* Google Gemini
* Claude
* Copilot  Microsoft
* ChatGPT
* DeepSeek

**Domains:**

* [**https://www.oscardelarenta.com/**](https://www.oscardelarenta.com/)
* [**https://www.bls.gov/ooh/**](https://www.bls.gov/ooh/)
* [**https://www.si.edu**](https://www.si.edu)

**Accounts:**

* GitHub: <https://trello.com/b/FspSO2CZ/ucd-genaiuxperrygrant>
* Trello: <https://trello.com/b/FspSO2CZ/ucd-genaiuxperrygrant>

**Resources:**

* **Topic: Prompt Engineering:** 
  + **Videos:**
    - Google's 9 Hour AI Prompt Engineering Course In 20 Minutes by Tina Huang
      * https://www.youtube.com/watch?v=p09yRj47kNM
      * September 3, 2025
    - Google's 8 Hour AI Essentials Course In 15 Minutes by Tina Huang
      * <https://www.youtube.com/watch?v=0Kr1eh1wwb8>
      * September 4, 2025
    - Prompt Engineering Tutorial – Master ChatGPT and LLM Responses by freeCodeCamp.org:
      * **<https://youtu.be/_ZvnD73m40o?si=QkztMa63rgfy__IE>**
      * September 7, 2025
    - Master Prompt Engineering for Beginners! (7 Essential Tips)
      * <https://www.youtube.com/watch?v=qJ8f90aU8qw> by AI Foundations
      * September 7, 2025