

SENG 310

Human Computer Interaction

Summer 2023

Introduction

Teaching Team

Instructor:

Hamid Mansoor; hmansoor@uvic.ca; ECS 609; Office hours: TBA

TAs:

Bahare Bakhtiari, baharebakhtiari@uvic.ca

Chehak Nayar; chehaknayar@uvic.ca

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A bit about me

Rawalpindi Medford Worcester Victoria



Victoria Interactive eXperiences with Information (VIXI) Lab

Co-lead by Prof. Miguel Nacenta, Prof. Charles Perin and Prof. Sowmya Somanath

Multiple exciting projects regarding HCI and Interactive Data Visualizations

<https://vixi.cs.uvic.ca/>



Course Mechanics

Important Information

Brightspace – will be used for communicating, sharing, uploading, and completing course related things (outline, ethics materials, assignments, exams) - **Please make sure you can access the course page!**

Student group websites – for posting project work (more details in Lab 1)

Email: hmansoor@uvic.ca - **ALWAYS include “SENG 310” in the subject**

Grading and Policies

Semester-long project: 70%

- Six multi-part Assignments
- Must work in teams
 - Groups of 4 students
 - All students in each team must be in the **SAME** Lab section

Midterm: 30%

- Tentative date: June 26th
- Open-book and take home

Labs

Four lab sections (B01 - B04)

Starting from the week of May 15th

Led by the TAs

Centered around the 6 assignments

Textbooks and Study Materials

No required textbooks

Strongly recommend following the proceedings of HCI conferences like ACM CHI

CHI 2023 Teaser Video: <https://www.youtube.com/watch?v=owjYbVI9eGQ>

CHI23

Hamburg, Germany | Hybrid
April 23-28, 2023
reCHInnecting



Weekly lecture slides

Any handouts/additional study materials will be posted on Brightspace

Common Questions

Waitlists and Lab Registration issues: Please reach out to: cscadvisor@uvic.ca

Brightspace issues:

<https://www.uvic.ca/systems/services/learningteaching/brightspace/index.php>

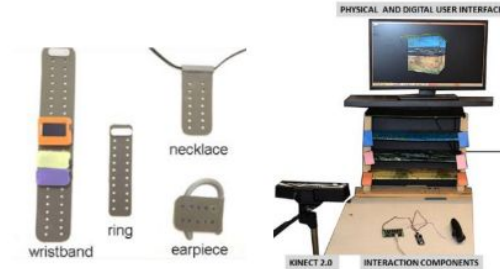
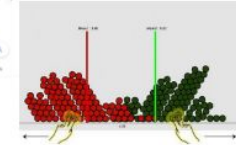
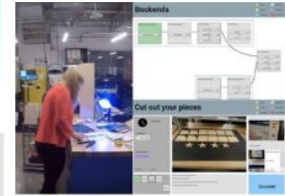
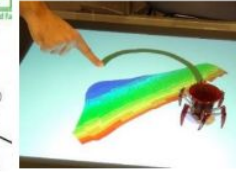
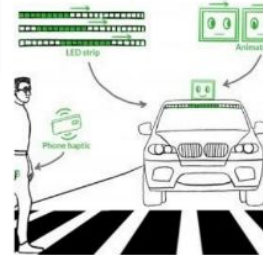
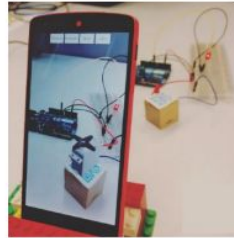
What is HCl according to you?

HCI is a multidisciplinary field that studies the use of technology by people and focuses on designing user interfaces that meet human needs such as being **useful**, **usable**, **enjoyable** and **creative**.

It borrows concepts and methods from several disciplines such as computer science, engineering, psychology, sociology and design and these help with understanding people and developing user interfaces

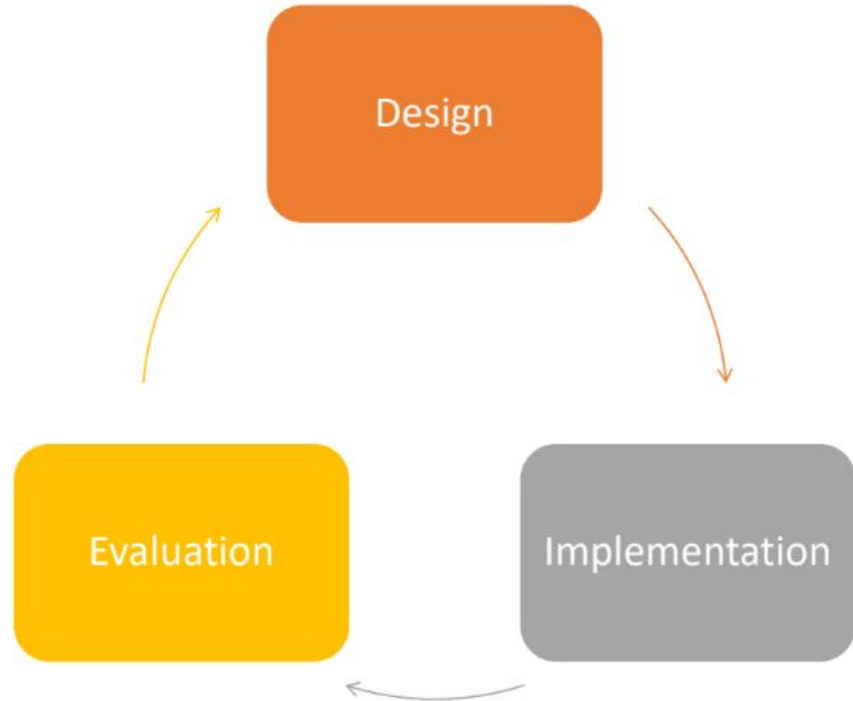
What is a user interface?

A user interface is any medium using which people can interact with information. In HCI we are concerned with people's interaction with machines, algorithms, data, other people mediated via some technology and digital information.



Challenges

Over the last few decades, the “interface” has become a critical component of software and hardware systems. People are now more aware of computers, have relatively more easy access to technologies and companion software, and have learned to have some expectations for how the technology as a whole should behave. People are less tolerant of difficult-to-use-systems or those that don’t serve their needs.



What you will learn - Outcomes of this course

- 1) Interact with people who you are designing solutions for
- 2) Identify HCI problems/opportunities
- 3) Prototype and evaluate computational solutions for those problems/opportunity



Project Overview

Throughout the term, you will work on a project in small groups

You will design, implement, and evaluate a prototype digital user interface - desktop, website, mobile, smartwatch etc.

Lab attendance is CRUCIAL for maintaining adequate progress

Project Overview

1) Project Proposal - 5%

Goal: To communicate an outline of your ideas and plan

2) Formative Data Collections from End-Users - 13%

Goal: To communicate your understanding of people's needs and identification of opportunities for which solutions can be developed

3) Low Fidelity Prototyping with Self-Evaluation - 13%

Goal: To develop, concretize and self-evaluate early design ideas

Project Overview

4) Medium-Fi Prototyping and Evaluation Plan - 13%

Goal: To develop an interactive, semi-functional prototype that you can use for evaluation with end-user

5) Final Evaluation with End-Users - 13%

Goal: Conduct a user evaluation to improve your interface design, reflect on the evaluation process, and transform the evaluation results into future design recommendations

6a) Final Presentation - 10%

Goal: To disseminate the project work by presenting and discussing it with a broader audience.

6b) Peer Review - 3%

Goal: To critically reflect upon other research projects

Note on writing code/programming capabilities

Depending on your project, a lot of the prototyping effort in this course does not require any coding

However, depending on your project idea you may need to write some code to create a more functional system. Remember though the focus is on user interface design and thinking about human needs, and not on how well organized your code is for example

If you design well and create a functioning system that would be counted as bonus!

Focus: learn to engage in Human-Centered System Design

Things we will not cover:

1. This course will not recap how to program – it is expected that you can write code
2. This is not a course that focuses on specific technologies such as how to build VR, AR, mobile, web apps or ML models etc.

Tips for your project

Choose a topic that you are **passionate** about that is **important** to you

Think beyond just revamping sites/applications you already use

Successful past projects have designed and implemented interfaces for environmental conservation/impact assessment, hiking, education etc.

Next week

Going over the history of HCI

Human Centered Design

Project description handout

Recommended readings

Brad A. Myers. "A Brief History of Human Computer Interaction Technology." ACM Interactions. Vol. 5, no. 2, March, 1998. pp. 44-54.

<https://www.cs.cmu.edu/~amulet/papers/uihistory.tr.html>

Shneiderman, Ben. "Encounters with HCI Pioneers: A Personal History and Photo Journal." ACM Interactions. 2016. <https://hcupioneers.wordpress.com/>