CM-2603 Data Science Group Project

Human Computer Interaction(HCI)

Week 07 | Prasan Yapa | Sriyan Fernando

Learning Outcomes

- Covers LO4 for Module

- On completion of this lecture, students are expected to be able to:

    Present an analysis of the user centered design process, cognitive aspects, research methods, modelling and prototyping used to produce applications related to Data Science
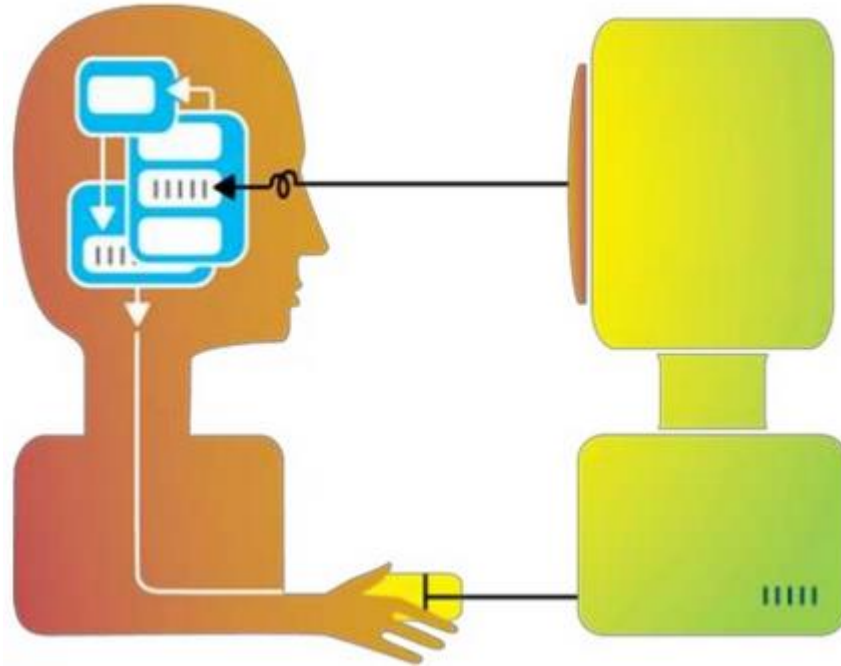
CONTENT

- What is HCI(Human Computer Interaction)?
- HCI Methodologies
- What is UCD(User Centered Design)?

What is HCI?

- Interaction between user and a computer OR relationship between the users(People) and the computer systems.
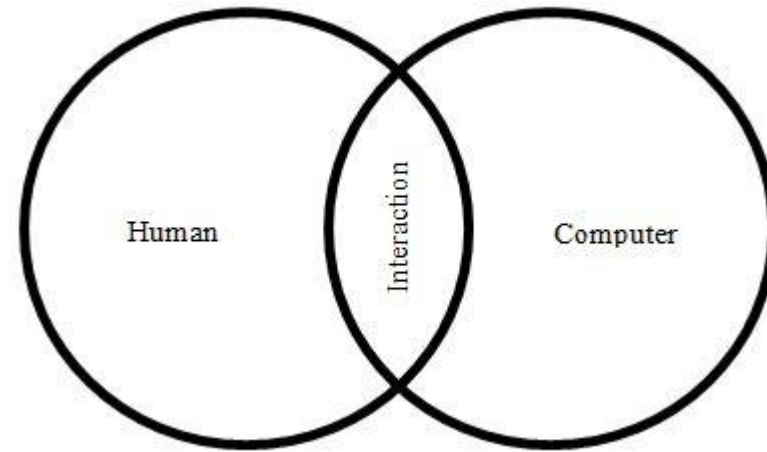
HCI

- **HCI tackles questions concerning how people interact with computers.**
  - Are computers "user-friendly"?
  - Are computers intuitive or complicated?
  - Are computers rewarding or frustrating?
  - How can computers be made accessible to everybody(eg: different physical abilities , different languages)?
  - To what level can computer interaction be standardized?

HCI has 03 Components

1. Human
2. Computer
3. Interaction

- The goal of HCI is to improve the interaction between users and computers by making computers more user friendly and receptive to user's needs.

1. Human

- Vision
- Touch
- Hearning
- Movement

Why do we need to understand Humans in HCI?

- Humans are limited in their capacity to process information.

- This has important implications for design.

- Interacting with technology is cognitive.

2. The Computer

- A computer system is made up of various elements.

- Each of these elements affects the interaction.

  1. input devices - text entry and pointing

  2. output devices - screen

  3. physical interaction - eg : sound

  4. memory - RAM and permanent media

  5. processing - speed of processing, networks

3. Interaction

- Difference between Interface vs Interaction?

HCI Methodologies:

- User Stories

- Brainstorm and Sketch

- Wireframe

- Prototype

What is UCD?

- Learn form users

- No agile concepts

- No validation hypothesis

- No way to measure design outcomes