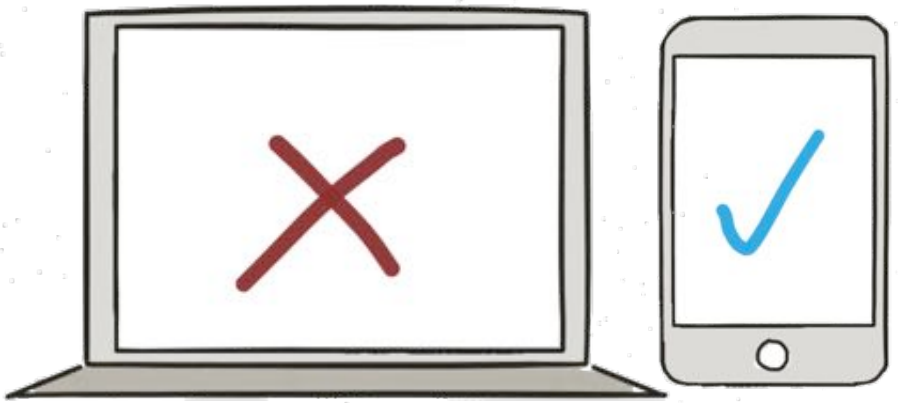
Introduction to COMP4461:

Human-Computer Interaction

Xiaojuan Ma Fall 2019

About this Course

- Instructor
  - Xiaojuan Ma
  - Email: mxj@cse.ust.hk
  - Office: RM3507



- TA
  - Taewook Kim (tkimam@connect.ust.hk)
  - Office hour: Tu 9:00 - 9:50AM (original lab time)
- Time and Location
  - Lecture: TTh 12:00pm – 1:20pm @ Rm 1410, Lift 27-28
  - Lab: 2 **in-class** lab sessions (see course syllabus: TA)

Course Website and Space

- Course website:
  http://home.cse.ust.hk/~mxj/page/COMP4461-201909.html
- Team Link: https://comp4461.slack.com/
- We will use slack for course communication
  - Make course announcement
  - Publish course materials
  - Submit assignments
  - Public discussion
  - Private message
- Give me an email address and I will invite you
  - My Slack Team ID is **xm**

http://www.forbes.com/sites/ellenhuet/2014/10/31/slack-raises-120m-at-1b-valuation/

Course Learning Outcomes

- **Knowledge/Content Related:**
- **Course ILO #1:** Understanding the basic concepts and methods in HCI research
- **Course ILO #2:** Understanding the foundations and trends of HCI applications

- **Academic Skills/Competencies:**
- **Course ILO #3:** Design an interactive system using various methods through different design activities.
- **Course ILO #4:** Prototype an interactive system with assorted digital and physical tools
- **Course ILO #5:** Evaluate an interactive system through user studies.

- **Other Learning Outcomes:**
- **Course ILO #6:** Communicate effectively with target users and different stakeholders in academia and industry

Grading Scheme

- **Experiential Learning**
- Three group projects **60%**
  - Project 1 15%
  - Project 2 20%
  - Project 3 25%
- Midterm: **15%**
- Video Paper: **15%**
- Participation + Bonus: **10%**

Personal Portfolio Page

- Create a personal portfolio page to host your personal HCI project diaries
  - May use free website builders e.g., wix.com
- Examples:
  - http://harkmylord.com/
  - http://simonpan.com/
  - http://www.garyjanderson.com/index.html
- TA will provide some tips on how to set up your own page online

(1) Projects 60%

- P1: Designing Meaningful Interactive Ad 15%
  - Identify a sustainability campaign on campus
  - Initial wireframe design 5%
    - Ideate with the help of a tool called Metaphoraction
    - Can use wireframe tools e.g., https://www.draw.io/
  - Revised "interactive" video prototype 10%
    - Pitch your design in class for peer review
    - Articulate the targeted theme, design principles applied, and design decisions made
  - Keep a personal diary of project 1
  - Lab 1: Tutorial on Metaphoraction (on Slack)

(1) Projects 60% (cont.)

- P2: Mixed Reality 20%
  - Group Point-of-View (POV) video 12%
    - Empathize, needfinding, ideation
    - Demonstration of proposed solution
  - Personal diary of Project 2 8%
    - Posted on individual portfolio
    - Text, pictures, diagrams, etc.
  - Lab 2: AR programming (in class)
- Group assignment
  - Work with different people in P2 and P3

(1) Projects 60% (cont.)

- P3: Human-Robot Interaction 25%
  - Group POV video with working demo 15%
  - Personal diary of Project 3 10%
  - Lab 3: robot programming (in class)
- Late policy
  - Up to 3 days in total
  - Available only by request in advance through email or private message on Slack to the TA
  - No credit otherwise

(2) Midterm 15%

- In-class, Tue Oct 15 (80 min)
- 3~5 Questions
- Open Book
  - Textbook and printed lecture notes only
  - No phone/pad, no computer (unless specified)

(4) Final Video Paper 15%

- Theme “Nudging”
- Length: 2~5 min
- Video Showcase
  - Final Screening on Nov 26 & 28
  - Audience’s Choice
    - Best video
    - Most educational video (intellectually and/or socially)
    - Most innovation video (concept and/or application)
    - Most entertaining video (story and/or presentation)

(4) Participation + Bonus 10%

- Attendance + Activeness
  - In-class exercises + peer review participation
  - In-class presentation “The good, the bad, the ugly”
  - Additional bonus awarded to excellent work in each project
- Note
  - Bring a pen/pencil and a deck of paper
  - 1 token earned for active participation in one lecture
  - 10 tokens can be used to trade for 1 additional late day

Course Learning Outcome

- Lecture, Projects, Midterm
  - Understand the basic concepts and methods in HCI
  - Understand the foundations and trends of HCI applications
- Lecture, Projects
  - Learn to identify user needs, abilities, and constraints
  - Learn to design, prototype, and evaluate HCI technologies
- Lecture, Projects, (Midterm)
  - Analyze potential social impact and responsibilities as well as possible ethical, legal, security and privacy issues
- Projects and Participation
  - Communicate effectively with target users and different stakeholders in academia and industry

Course Learning Outcome	Exemplary	Competent	Needs Work	Unsatisfactory
Understanding the basic concepts and methods in HCI research	Define and clarify the basic HCI concepts and methodologies, and provide proper examples for demonstration	Define and clarify the basic HCI concepts and methodologies.	Define the basic terminologies and methodologies in HCI research, have difficulty in clarifying the details, conditions, and contexts.	Have difficulty in explaining the basic concepts and processes of common design / prototyping / evaluation methods in HCI research
Understanding the foundations and trends of HCI applications	Elicit the history of HCI applications, the key changes, and driving forces, clarify the major challenges and future directions	Elicit the history of HCI applications, and explain the key changes and driving forces	Elicit the history of HCI applications, have difficulty in explaining the key changes and driving forces	Have difficulty in identifying the core values, scopes, challenges, and trends in HCI applications
Design an interactive system using various methods through different design activities	Conduct common design activities such as needfinding, make good use of design tools such as mindmap, and generate clear design insights	Conduct common design activities such as needfinding and make good use of design tools such as mindmap	Conduct common design activities such as needfinding and brainstorming, have difficulty in using design tools such as mindmap	Have difficulty in conducting common activities such as needfinding and brainstorming in design process to generate design ideas

Prototype an interactive system with assorted digital and physical tools	Conduct common prototyping activities, make good use of various prototyping tools, and generate prototypes at different fidelities	Conduct common prototyping activities and make good use of various prototyping tools	Conduct common prototyping activities, have difficulty in using various prototyping tools	Have difficulty in conducting common prototyping activities and using various prototyping tools
Evaluate an interactive system through user studies	Design and conduct user studies and data analysis, make good use of various prototyping tools, and generate good design implications	Design and conduct user studies and data analysis, and make good use of various prototyping tools	Design and conduct user study and data analysis, have difficulty in using various evaluation tools	Have difficulty in designing user studies and conducting data analysis
An ability to communicate effectively with target users and different stakeholders in academia and industry	Explain HCI designs / applications to a general audience and handle questions, and make good use of multimedia	Explain HCI designs / applications to a general audience and handle questions	Explain HCI designs / applications to a general audience, have difficulty in handling questions	Have difficulty in explaining HCI designs / applications to a general audience

Text Book (Required)

- Hartson, Rex, and Pardha S. Pyla. *The UX Book: Process and guidelines for ensuring a quality user experience*. Elsevier, 2012. ISBN-13: 978-0123852410, ISBN-10: 0123852412

  http://www.theuxbook.net/

- Yvonne Rogers, Heken Sharp, & Jenny Preece. *Interaction Design: Beyond Human-Computer Interaction* (3rd Edition). John Wiley & Sons, Inc, 2011. ISBN 0-470-66576-9, 978-0-470-66576-3.

  http://www.id-book.com/

Reference Book (Optional)

- Lazar, Jonathan, Jinjuan Heidi Feng, and Harry Hochheiser. *Research methods in human-computer interaction*. Morgan Kaufmann, 2017. eBook ISBN: 9780128093436, Paperback ISBN: 9780128053904

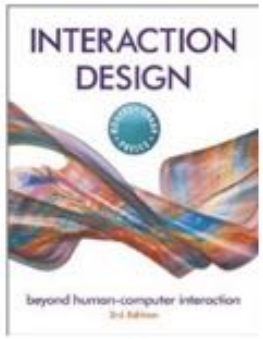
  https://www.elsevier.com/books/research-methods-in-human-computer-interaction/lazar/978-0-12-805390-4

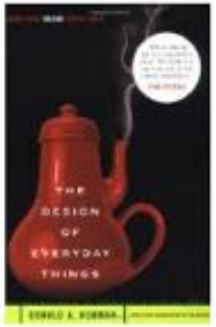
- Alan Dix, Janet Finlay, Gregory Abowd & Russell Beale. *Human-Computer Interaction* (3rd Edition). Prentice Hall, 2004. ISBN 0-13-046109-1.

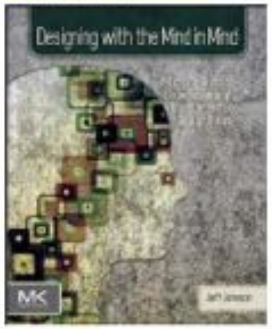
  http://hcibook.com/e4/

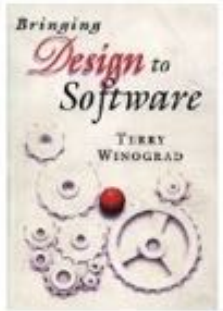
“Stay hungry. Stay foolish.”

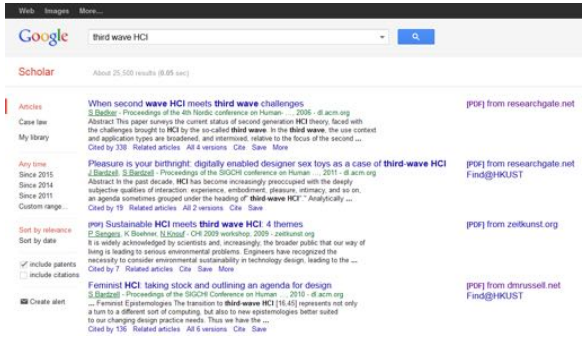
- By Steve Jobs

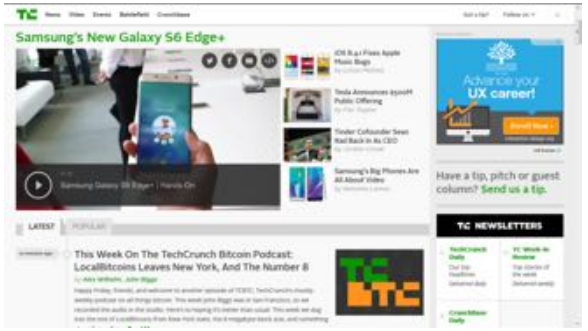


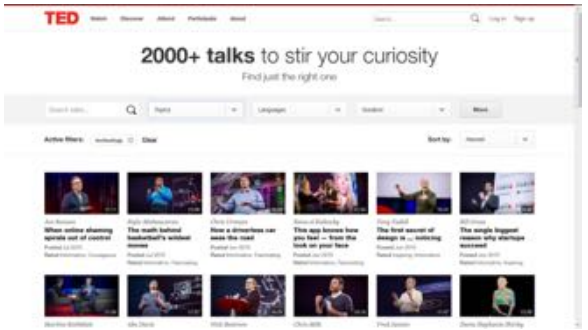












Learning Aims

Conscious

Critical

Creative

Work for Today

- Join Slack and play with it
  - There is a direct “join slack” link on Canvas
  - TA will confirm and verify membership by the end of the add-and-drop period (Sep 16)
- Create your own Portfolio Page
  - If you already have a personal website, great
  - If not, you can setup a personal page at HKUST
  - TA will provide further information on Slack (#lab1_web)

Questions?

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