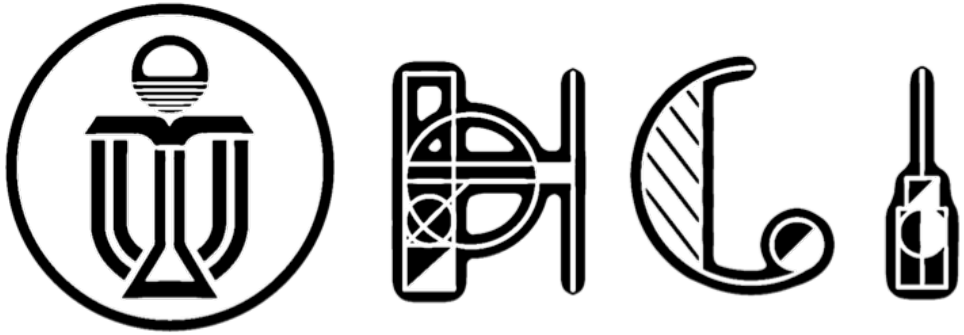
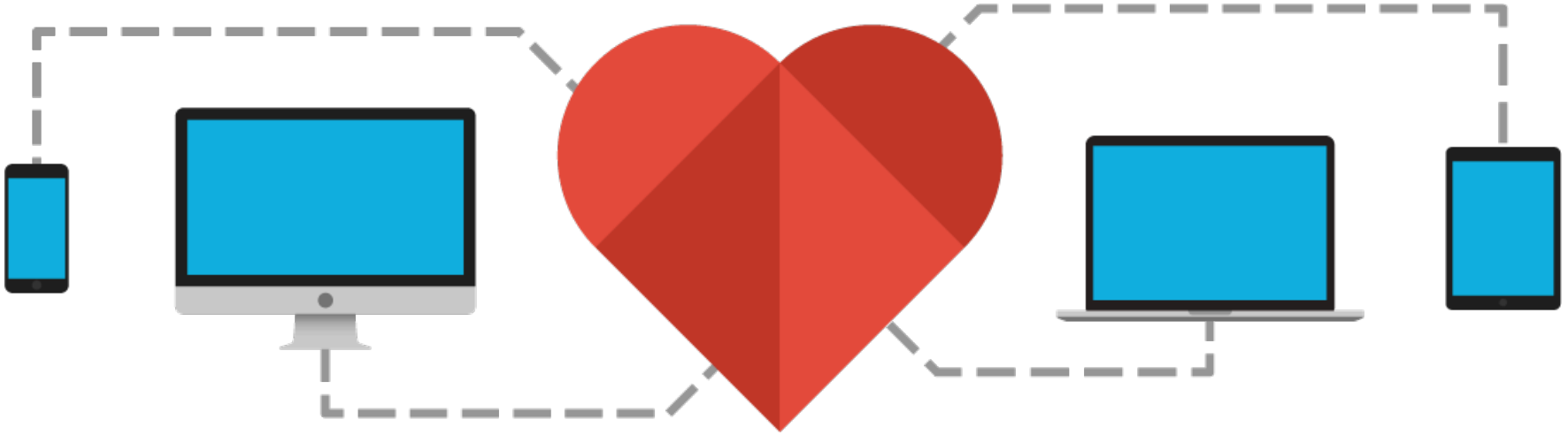


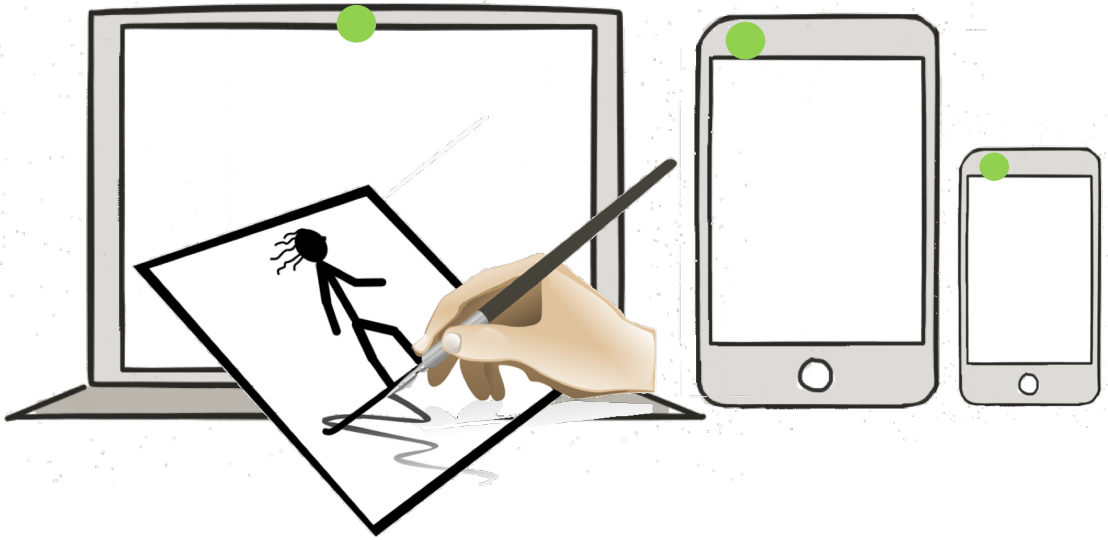
Introduction to CSIT6000N:

Advanced Topics in Human-Computer Interaction



Xiaojuan Ma Spring 2022

About this Course



- Instructor
  - Xiaojuan Ma
  - Email: mxj@cse.ust.hk
  - Office: RM3507
- TA
  - Chengbo Zheng (czhengag@connect.ust.hk)
  - Qingyu Guo (qguoag@connect.ust.hk)
  - Office hour: by appointment
- Time and Location
  - Lecture: Mon 7:30pm – 10:20pm @ Zoom link on canvas
  - Lab: 3 lab sessions (online recording)

Course Website and Space

- Course website:

  http://home.cse.ust.hk/~mxj/page/CSIT6000N-202202.html

  https://canvas.ust.hk/courses/42449

- We will use Canvas for course communication
  - Make course announcement
  - Publish course materials
  - Submit assignments
  - Public discussion
  - Private message

CSIT6000N (L1)

Discussions
Grades
People
Pages
Files
Syllabus
Outcomes
Quizzes
Modules
BigBlueButton
Collaborations
More Tools
Google Drive
Office 365
Rubrics
New Analytics
Zoom Meeting
Library Toolbox

CSIT6000N (L1) - Advanced Topics in Human-Computer Interaction

Edit

Link to <Course Page >

Lecture	Date	Topic	Presenter	Note
1	Mon Feb 7	Introduction to CSIT6000N and to HCI	Xiaojuan Ma	
		Fundamental: Human-Centric Design	Xiaojuan Ma	
2	Mon Feb 14	Fundamental: Understanding Humans	Xiaojuan Ma	Group Project Topic Announcement
		"The Good, the Bad, the ____" Competition	Class	
3	Mon Feb 21	Topic: Multimodal Interaction	Xiaojuan Ma	Essay Part I Submission; Group Formation
		Design: Empathize	Xiaojuan Ma	
4	Mon Feb 28	Topic: Human-Robot Interaction (HRI)	Xiaojuan Ma	
		Design: Ideate	Xiaojuan Ma	
5	Mon Mar 7	Topic: Ubiquitous Computing	Xiaojuan Ma	
		Design: Prototyping	Xiaojuan Ma	
6	Mon Mar 14	Topic: CSCW and Social Computing	Xiaojuan Ma	
		Evaluation: Preparation and Questionnaire	Xiaojuan Ma	
7	Mon Mar 21	Topic: Virtual / Augmented Reality	Xiaojuan Ma	
		Group Project I: Needfinding Presentation	Class	
8	Mon Mar 28	Topic: Computing for Good	Xiaojuan Ma	
		Evaluation: Heuristic and Usability Analysis	Xiaojuan Ma	
9	Mon Apr 4	Evaluation: Result Analysis	Xiaojuan Ma	
		HCI: From Lab to the Real World	Xiaojuan Ma	Essay Part II Submission
10	Mon Apr 11	Mid-term Exercise	Class	
11	Mon Apr 25	Group Project II: Final Presentation	Class	Peer Evaluation; Personal Project Portfolio Submission

Course Introduction, outcomes, grading schemes, assessment rubrics, and references

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**
- One group project **35%**
  - Phase I 15%
  - Phase 2 20%
- Critical Thinking Competition: **10%**
  - Presentation 5%
  - Two essays 5%
- Midterm Exercise: **35%**
- In-class Exercises: **15%**
- Participation + Bonus: **5%**

Personal Portfolio Page

- Create a personal portfolio page to host your personal HCI project diaries and essays
  - 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

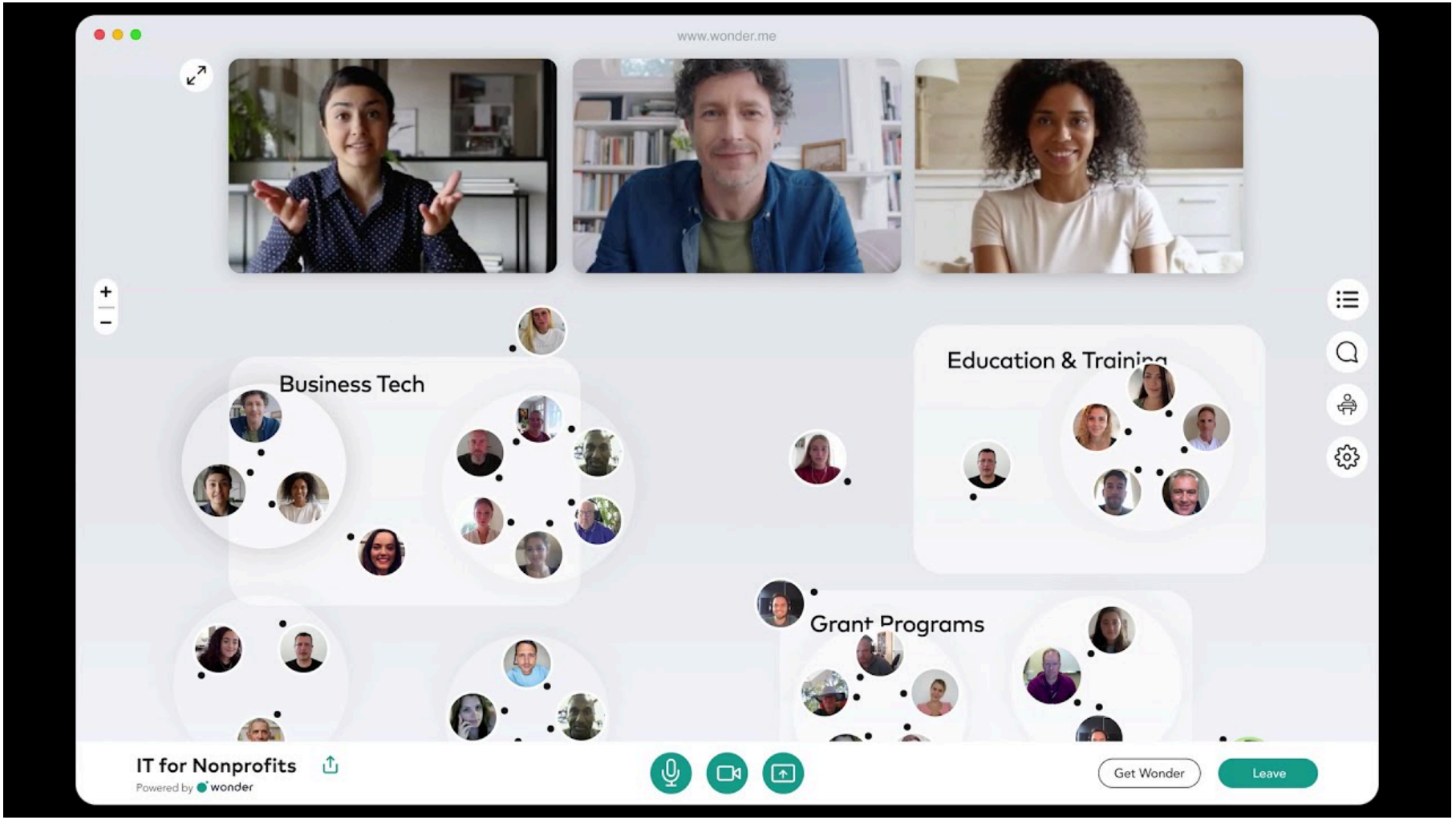
(1) Group Project 35%

- Theme “Human Need in a Public Health Crisis”

Notes on Group Projects

- Group Assignment
  - Skills + constraints (e.g., timezone): self-organization first by Feb 21
- Two Phases
  - Needfinding + Ideation
  - Prototyping + Evaluation
- Grading
  - Group work: proportional to individual efforts
  - Personal diary: emphasis on personalized reflections

https://www.wonder.me/



(2) Critical Thinking Competition 10%

- Theme “The Good, the Bad, the _____”
- In-Class Poster Presentation
  - Monday, Feb 14
  - Audience’s Choice
    - Best idea
    - Best poster
- Two Essays (1-page each)
  - Essay I (deadline Feb 21): justify your idea
  - Essay II (deadline April 4): reflect back on your idea – Change of opinion? New thoughts?

(3) Midterm Exercise 35%

- In-class Midterm Exercise
  - Midterm: Monday, April 11
- 7~8 Questions
  - Multiple choice questions
  - Problem-solving questions
  - Design questions

(4) In-class Exercises 15%

- In-class 30 min
  - 20min exercise + submission on Canvas
  - 10min discussion
- 1~2 Questions
  - Problem-solving questions
  - Design questions
- Grading
  - Choose the best 5 exercises
  - Submission + bonus for high-quality answers

(5) Participation + Bonus 5%

- Attendance + Activeness
  - Peer review participation
  - In-class Q&A
  - Additional bonus awarded to excellent work in each project or activity
- 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, Exercises, 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, Competition, (Midterm)
  - Analyze potential social impact and responsibilities as well as possible ethical, legal, security and privacy issues
- Projects, Competition, 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

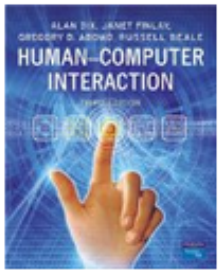
  https://www.elsevier.com/books/research-methods-in-human-computer-interaction/lazar/978-0-12-805390-4

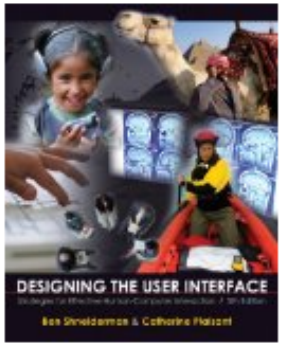
- Alan Dix, Janet Finlay, Gregory Abowd & Russell Beale. *Human-Computer Interaction* (3rd Edition). Prentice Hall, 2004. ISBN 0-13-046109-1.

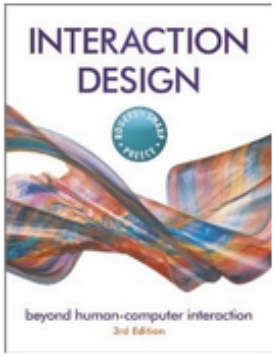
  http://hcibook.com/e4/

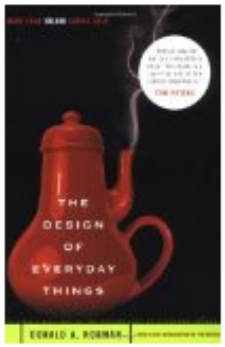
“Stay hungry. Stay foolish.”

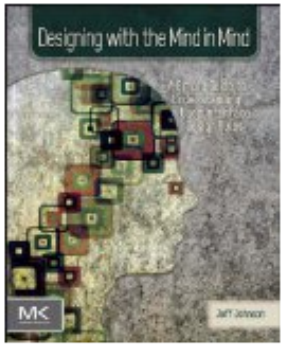
- By Steve Jobs

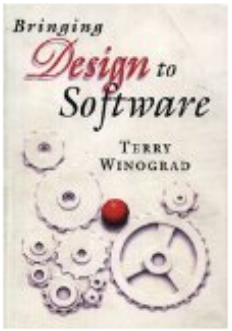


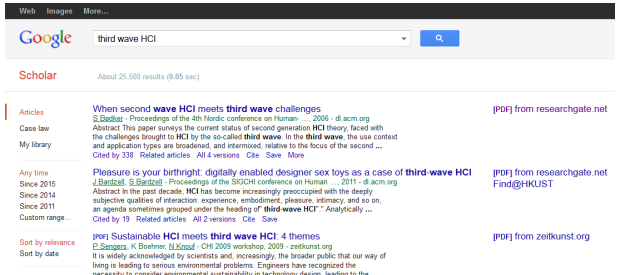


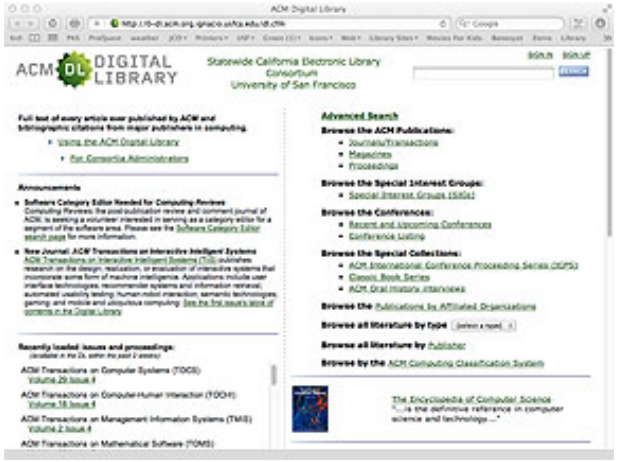


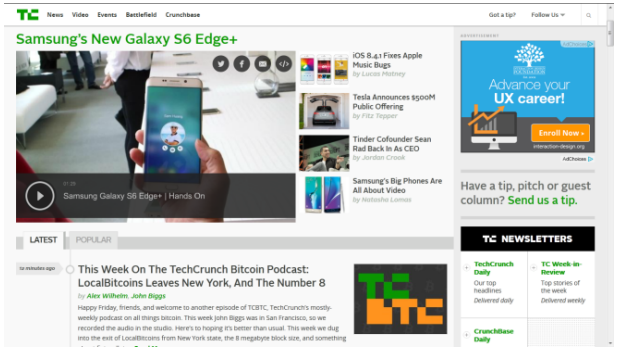


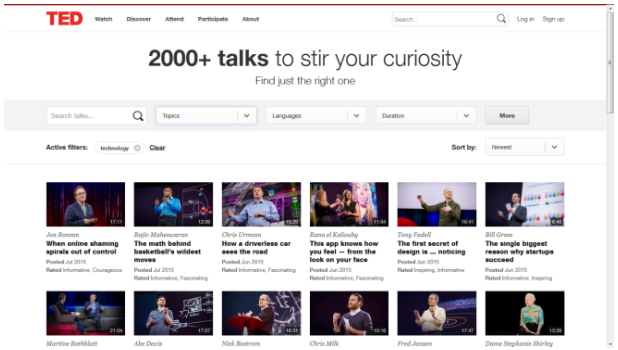


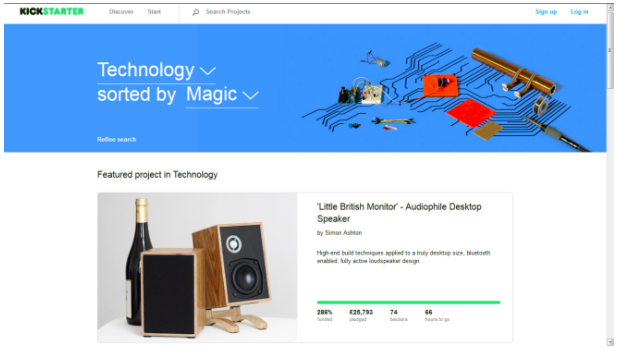










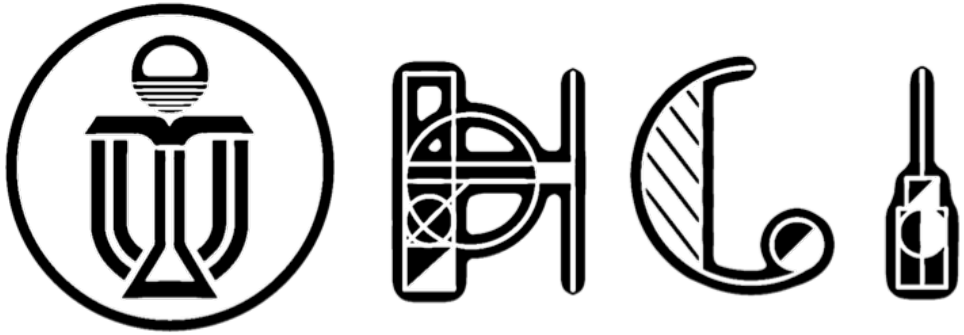


Learning Aims

Conscious **Critical** **Creative**

Work for Today

- 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 Canvas



Questions?

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