

Welcome to Advanced Topics in HCI!

Koji Yatani

Welcome!

I am Koji Yatani (矢谷浩司), your instructor.

This course is:

- 3747-108: Advanced Topics in HCI (ヒューマンコンピュータインタラクション特論)
- 4915100: Human Interfaces (ヒューマンインタフェース)

If you need a credit, please register yourself to either of these courses (cannot register to both).

Just a bit of background...

Computers are used to be huge.



ENIAC (1946)

<http://en.wikipedia.org/wiki/File:Eniac.jpg>

And then like this.



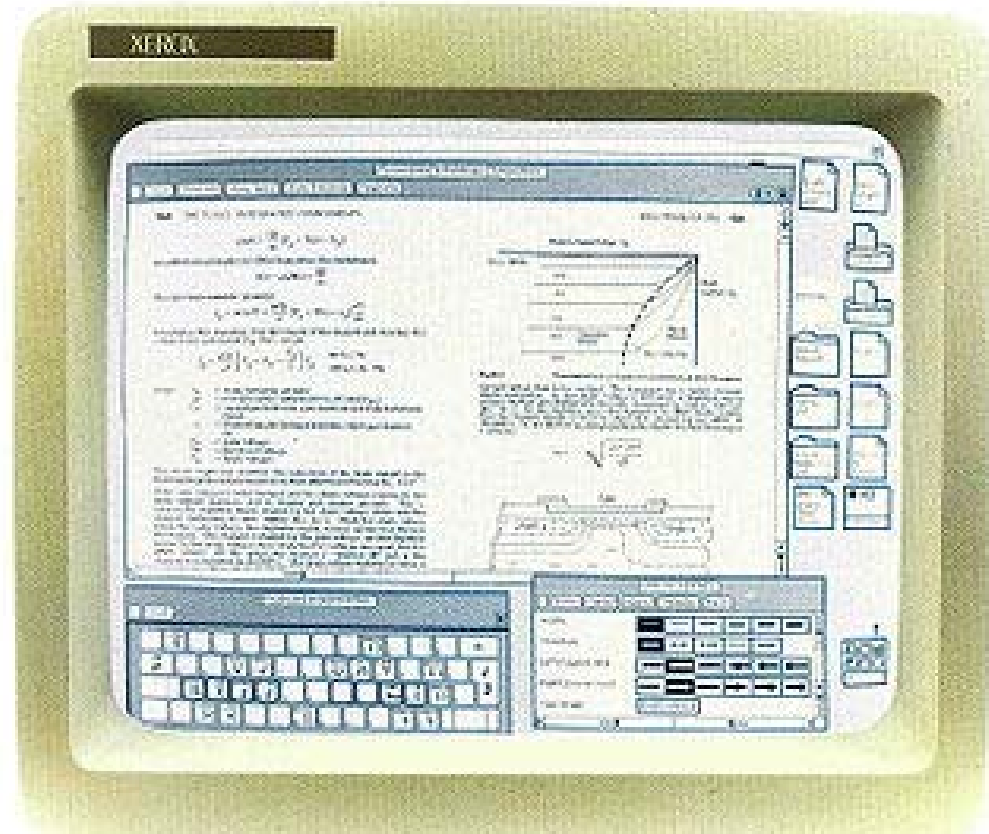
Apple II (1977)

http://en.wikipedia.org/wiki/File:Science_museum_025_adjusted.jpg

Now, smaller, smaller, smaller!



Are these the right thing to do?:
Conventional interfaces would not work.



What new applications do we want
if computers are in completely different forms?



New ways to interact with new devices

Re-think about for what we want to use computers.

Re-think about how we want use computers.

Re-think about how we design new computers.

Imagine that
everything around you is a computer
that collaborates, senses, and helps.

How would you design the world? 😊

Two goals of this course

Let's learn the history: Learning classic and recent work on HCI with emphasis on sensing technologies and hardware

Let's learn skills: Having hands-on experience on building interactive systems with hardware (e.g., sensing components)

Course design

Research discussions

Discussing classic latest HCI work published at top-tier conferences

Capstone projects

Developing an interactive system with machine intelligence behind

Evaluation

Research discussions [25%]

For your performance in leading discussions about the paper assigned to you from the reading list

Capstone project [60%]

For the quality of your system and demonstration

Engagement and attendance [15%]

For your attendance to the course and your involvement in discussions during the class

Prerequisite (all recommended)

Basic HCI research experience and knowledge

Programming skills

English communication skills

And your passion 😊

Course policy

Work proactively, work collaboratively.

Don't expect the instructor to teach everything for you.

This is an English-friendly class. Strongly encouraged to use English (even if you are Japanese).

Course website

<http://iis-lab.org/hci>

Please check regularly. Announcements about this class will be made through this website.

Academic misconduct

No tolerance to any academic misconduct (e.g., plagiarism, stealing others' ideas)

We have strong penalties when misconducts are found.

Just don't do it. Not worthwhile at all!

Research discussions

We have two roles in research discussions.

Chair: Leading a discussion about the paper assigned at the class

Member: Engaging the discussion with the chair and fellow members

Research discussion chair

You must do a chair at least once for marks.

In case we don't have many people, I may have to ask some of you to volunteer one more extra paper (you will of course get extra marks 😊).

Research discussion chair

Read the assigned paper carefully before the class

Deliver a 10-min presentation that covers:

- Backgrounds of the research,
- Summary of the developed system,
- Novelty and originality of the work, and
- Pros and cons of the system/method

And then, lead a discussion about the work

Research discussion chair

Presentation slides must be in English, though delivery can be either in English or Japanese. (English strongly encouraged)

Discussions can be either in English or Japanese (again, English strongly encouraged).

I will do some translations during the discussions.

Research discussion member

Read all papers before coming to the class.

Prepare discussion points.

- What did you like in this work? Why?
- How do you think this work can inspire your research?
- What are possible applications out of this technology?
- What are shortcomings? What improvements do you think this technology needs?
- If you were a reviewer on this paper, how would you rate and provide feedback?

Paper assignment

Our reading list is already on the course website.

Choose five papers you would like to serve on as a chair, and write them down in the discussion board.

<http://yatani.jp/teaching/doku.php?id=2016hci:paperassignment>

I will do my best to accommodate your preferences.

Capstone Project

Developing an interactive system using some sort of hardware.

Any system is welcome as long as it is interactive and cool.

You will be asked to do a demo at the end of this course.

Collaboration

You may team up with fellow students.

The team size must be no more than three. Two people recommended.

Email the info about your team (name, grade, email, and your team name) to me by tomorrow

Your hardware

Anything is acceptable, including smartphones, cameras, Kinect sensors, and even what you develop by yourselves.

Projects without hardware are not marked.

Your system

You may use anything you like. Any programming language, any tool and any library.

But you have to implement the majority portion of the system by yourself. Naïve combinations of existing devices and libraries will not be marked.

Deliverables

Live demo and presentation at the last class

Demonstration video

Capstone Project evaluation

[15%] Project progress

[10%] Originality

[15%] Implementation thoroughness

[10%] Interaction design

[10%] Presentation delivery

Any question?

Let's move on.

Today's topic: Vision videos

What is a vision video?

A video that envisions future technologies

Produced by companies mainly for promotional purposes

Often very inspiring to our research 😊

Let's watch vision videos!

We are watching a few vision videos. Please watch them carefully. Also think about the following questions:

- What do we already have?
- What has research already achieved?
- What has not been realized yet?
- What are technologies you like? Why?
- What are technologies you didn't like? Why?
- How was this video so inspiring and futuristic?