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Week 10 Updates
Reminder: Piazza posting guidelines

1. Check to see if your question has already been asked/answered before posting.
2. If your question has anything to do with schedule (quiz, exam, readings, EC quiz, etc.), check the syllabus before asking.
3. Post questions publicly whenever possible (unless it’s a private matter) so other students can help answer and/or if other people have the same question they can see the answer.
4. Do not post answers to quizzes/exams. This is an academic integrity violation.

Side note: students have been sharing self-made study guides - TA’s do not review these and cannot guarantee the content/answers are reliable.
Fill out your CAPEs!

- Fill out your CAPES before **December 10th at 8AM**!
- If **95%** (or more) students per section complete CAPE, the entire section will get 1% course grade
- CAPE URL: [https://cape.ucsd.edu/students/](https://cape.ucsd.edu/students/)
Last Week’s Topics

- Lecture 14 | Dr. Guo: HCI/Design Careers
- Lecture 15 | Dr. Hollan: A Glimpse of Human-Computer Interaction
Lecture 14

HCI/Design Jobs for New College Grads,

Dr. Guo
Lecture 14 | Review Questions

1. What is HCI/Design? What are the goals of the field?
2. What are the steps that each HCI/Design project typically goes through in development?
3. What jobs can one typically find in the HCI/Design/UX area? How are they connected to the steps of the HCI/Design project development?
4. According to Dr. Guo, what are good reasons to obtain a master's degree or a PhD in HCI, Design or a related field?
5. Based on Dr. Guo’s advice, what are the three most important things needed to obtain and HCI/Design job?
6. What are the basic and the advanced ways to build up a portfolio for an HCI/Design job?
7. How can you establish connections helpful for obtaining an HCI/Design job?
8. Does one need design background to start working in HCI/Design/UX? Know examples from the reading.
9. How does the size of the company affect the roles their employees need to fill?
1. What is HCI/Design? What makes a design good?

**HCI** = Human-Computer Interaction
What makes something be well-designed?

**Your goal should be for each page or screen to be self-evident, so that just by looking at it, the average user can say “I get it”.**

*Steve Krug*

Bad design - not clear what side to push

Better design - obvious what side to push
2. What are the steps that each HCI/Design project typically goes through in development?

   Needfinding
   Storyboarding
   Paper Prototyping
   Mockups: Visual Design
   Interactive Prototypes
   User Testing
   Online Experiments
   Final Web/Mobile App
2. HCI/Design steps: Needfinding

**Needfinding**

- Storyboarding
- Paper Prototyping
- Mockups: Visual Design
- Interactive Prototypes
- User Testing
- Online Experiments
- Final Web/Mobile App

Observe potential users in their natural habitats, interview them, find their actual problems/needs.

“Make something people need!!”
Photo by Kai-Fu Lee, motto by Y Combinator
2. HCI/Design steps: Storyboarding & Paper Prototyping

Needfinding
Storyboarding
Paper Prototyping

Mockups: Visual Design
Interactive Prototypes
User Testing
Online Experiments
Final Web/Mobile App

Make low-fidelity sketches on paper and get early user feedback

Video: https://www.youtube.com/watch?v=GrV2SZuRPv0
2. HCI/Design steps: Mockups & Interactive Prototypes

- Needfinding
- Storyboarding
- Paper Prototyping

Mockups: Visual Design
Interactive Prototypes
User Testing
Online Experiments
Final Web/Mobile App

Use computer tools to make higher quality prototypes. Write code to make it into a working app.
2. HCI/Design steps: User Testing & Online Experiments

- Needfinding
- Storyboarding
- Paper Prototyping
- Mockups: Visual Design
- Interactive Prototypes
- User Testing
- Online Experiments
- Final Web/Mobile App

A/B testing:

Bottom design resulted in +60$ million to campaign donations

Do science! Test on real people in their natural habitats, get users into your lab, deploy experiments online & analyze collected data.
2. HCI/Design steps: Final Web/Mobile App

- Needfinding
- Storyboarding
- Paper Prototyping
- Mockups: Visual Design
- Interactive Prototypes
- User Testing
- Online Experiments

Final Web/Mobile App

Steve Jobs was right: Real Artists Ship!
by Jim Connolly

Steve Jobs famously said; “Real artists ship”. He was referring to the fact that everyone has ideas, but real artists deliver on them or ship them, as he put it.

Source: https://www.creativethinkinghub.com/steve-jobs-was-right-real-artists-ship/

Product is never “done”, just shipped!
3. What jobs can one typically find in the HCI/Design/UX area? How are they connected to the steps of the HCI/Design project development?

- **UX Researcher** - needfinding, user testing/experiments
  - (often are master’s or Ph.D. grads)

- **Product Manager (PM)** - needfinding, team coordination

- **UX/Interaction/Product Designer** - non-code prototypes
  - *(most common* type of job for new college grads)*

- **UX Architect/UX Prototyper** - design + some coding

- **Visual Designer** - art/graphics

- **Data Scientist** - write lots of code to analyze data; Ph.D.-focused

- **Front-end Developer** - write lots of production code
4. According to Dr. Guo, what are good reasons to obtain a master's degree or a PhD in HCI, Design or a related field?

Not everyone who wants to work in HCI/Design/UX should go into grad school

Good reasons to get a masters:

- Maybe:
  - if your field is far away from design
  - if you want to be a design teacher

- Yes:
  - if you don’t have a strong portfolio yet
  - if you can afford the tuition and time
  - if you want to be a UX Researcher
4. According to Dr. Guo, what are good reasons to obtain a master's degree or a PhD in HCI, Design or a related field?

Not everyone who wants to work in HCI/Design/UX should go into grad school

Good reasons to get a PhD:

- Maybe:
  - if you want to be a UX Researcher
- Yes:
  - if you want to be a university professor
  - if you want to be a research scientist
  - if you want to be a data scientist
5. Based on Dr. Guo’s advice, what are the three most important things needed to obtain and HCI/Design job?

Most important factors for maximizing the chances of getting an interview:

Build up a design **portfolio**, lean hard on personal and alumni **connections**, and get a design **internship** while in college.
6. What are the basic and the advanced ways to build up a portfolio for an HCI/Design job?

Basics:

- Start with a personal website
- Class projects with design components
- Find work/volunteering options, e.g. friends, student associations, etc.
  For example
  - Freelance designer for local companies/startups
  - Look beyond web/mobile apps - create posters, art pieces, event flyers, etc.
- Get design or other internships (and put them into your portfolio)
- Get inspiration from friends’/alumnis’ portfolios/resumes
6. What are the basic and the advanced ways to build up a portfolio for an HCI/Design job?

Advanced strategies:

- Include your (compelling and fresh) point-of-view
  - It should frame your work & make it stand out
- Be able to justify and critique your own process.
  - Justify what you did, how you did it, and why it matters
- Include improved existing projects if you did that type of work
  - In fact, that’s much closer to what you’ll do in your actual job
- Emphasize most relevant projects to your desired job roles
  - = Change your resume for different jobs
- If you can’t get into workforce right away - continue working on your portfolio, and get any job, perhaps unrelated to design
7. How can you establish connections helpful for obtaining an HCI/Design job?

Connections are important!
- Don’t be shy about asking people!
- Cold-email alumni, especially recent alumni who put themselves on career advising lists
- Cold-email alumni regardless; people are nice!
- Friends, family, dormmates, instructors ...
- Your bosses from prior jobs/internships
- Most good jobs obtained via personal connections - Also use personal connections to critique your portfolio, resume, and cover letters
8. Does one need design background to start working in HCI/Design/UX? Know examples from the reading.

There are many ways to get into UX, design background is not necessary.

For example, some of the professions mentioned in “How I Got Into UX” previously were:

- CogSci major
- Web developer
- Business school student
- Accountant

There are also design adjacent jobs, like front-end developer
9. How does the size of the company affect the roles their employees need to fill?

In general, smaller company -> more varied roles

(e.g., designer at startup may do needfinding, front-end coding, even marketing)

- N=1 (freelancer):  ++flexibility, --uncertainty
- N=tiny (startup):  +variety, +growth, -uncertainty
- Small-ish design agency: work directly with clients
- In-house designer at big company: more fixed roles
  - (Except when they don’t have much experience with design yet. Then you’ll probably have to do a bit of everything.)
Lecture 15

A Glimpse of Human-Computer Interaction

Dr. Hollan
Lecture 15 | Review Questions

1. What advice does Dr. Hollan give in lecture?
2. What are the origins of Human-Computer Interactions (specifically at UC San Diego)?
3. What makes computers so special?
4. What does Hollan mean when he says that the “boundary between physical and digital worlds become permeable?”
5. What is the “Data Revolution?”
6. What is the Spore Interface study?
7. What is activity history? What examples did Dr. Hollan describe in both lecture and the reading?
1. Set **expectations** to do significant things

2. Take time to think about **what’s important** to you

3. Be thoughtful about **who** you spend time with

4. Refuse to let the **urgent** drive out the **important**
2. What are the origins of Human-Computer Interactions (specifically at UC San Diego)?

**Early Days:**
- Institute for Cognitive Science
- Parallel Distributed Processing
- User Centered System Design

**Today:**
- New Design Lab
  - Focused on Complex Socio-technical Systems

**HCI/Design Faculty:**
- Steven Dow
- Philip Guo
- Jim Hollan
- David Kirsh
- Scott Klemmer
- Don Norman
- Taylor Scott

**Highlighted HCI/Design Courses:**
- DSGN 1: Design of Everyday Things
- COGS 10: Cognitive Consequences of Technology
3. What makes computers so special?

Computers reinform the ways we think

New medium for representation that offers more plasticity

Changing forms of computers

The monolithic computer is being reassembled in new forms

Our activities are increasingly mediated by computers
4. What does Hollan mean when he says that the “boundary between physical and digital worlds become permeable?”
5. What is the “Data Revolution?”

“We don’t know nearly enough about what people really do”

Massive Data Collection
6. What is the Spore Interface study?

Examined behaviors of people playing Spore in order to better design the game’s interface.
7. What is activity history? What examples did Dr. Hollan describe in both lecture and the reading?
Quiz time!

● No talking, signing, or communicating of any kind.
● Put *everything* away except a pen or pencil (make sure it’s a black pen and press hard with a pencil)
● When you get your quiz:
   1. Write your name in the “Name” box
   2. Write and bubble in your PID
   3. Sign the Academic Integrity Agreement
   4. Bubble in *this* section (regardless of which you’re assigned to)
● Please have your student ID out when you turn in your quiz!
Write and circle in your PID

Write down your name here

UC SAN DIEGO – DEPARTMENT OF COGNITIVE SCIENCE

STUDENT PID NUMBER

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Section you are taking this quiz:

Please Bubble only one!

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[2] ○ Monday @ 4 Lauren
[3] ○ Monday @ 5 Alexis
[4] ○ Monday @ 6 Kenny
[5] ○ Friday @ 9 Sandhya
[6] ○ Friday @ 10 Arturs
[7] ○ Friday @ 11 Subathra
[8] ○ Friday @ 12 Elizabeth

Quiz will not be graded without Academic Integrity Signature.

ACADEMIC INTEGRITY

By taking this quiz, you agree that you will follow ALL UCSD ACADEMIC INTEGRITY policies. It is YOUR responsibility to know and understand all of the policies. Failure to follow all UCSD Academic Integrity policies could result in expulsion from UCSD.

Signature

Date

Your signature above certifies that you will follow and that you know that you will suffer the consequence for ANY academic integrity violation.

YOUR ANSWERS GO HERE

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