

User Interface Design, Prototyping, and Evaluation

Introduction & Course Overview  
CSE 441 – Advanced HCI

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University of Washington  
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Outline

- Who are we?
- Course overview & schedule
- Introductions
- Teams

Who are we? James Landay

- Professor in CSE at the University of Washington
  - formerly professor in EECS at UC Berkeley
  - spent 3 years as Director of Intel Labs Seattle
  - just finished 2.5 year sabbatical at Microsoft Research Asia
- PhD in CS from Carnegie Mellon '96
- HCI w/ focus on informal input (pens, speech, etc.), web design (tools, patterns, etc.), & Ubicomp
- Founded NetRaker, leader in web experience management (later sold to Keynote)
- Co-authored *The Design of Sites* with Doug van Duyne & Jason Hong

Who are we? Nikki Lee

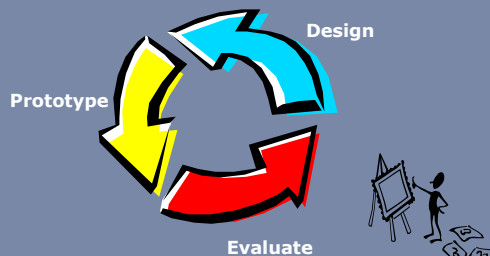
- MS student in HCDE at the University of Washington
- BS in ECE from Olin College 2010
- HCI w/ focus on interaction design, ubicomp, web
- Office Hours TBD

How to Design and Build UIs

- UI Development process
- Usability goals
- User-centered design
- Task analysis & contextual inquiry
- Rapid prototyping
- Evaluation
- Programming

Iteration

At every stage!



## Goals of the Course

- 1) Learn to prototype, evaluate, & build UIs
  - *the needs & tasks of prospective users*
  - *cognitive/perceptual constraints that affect design*
  - technology & techniques used to prototype UIs
  - techniques for evaluating a user interface design
  - importance of iterative design for usability
  - how to work together on a team project
  - communicate your results to a group
    - key to your future success
- 2) Understand where technology is going & what UIs of the future might be like

## Course Format

- Quarter long project & individual homework
- Interactive lectures on Tuesdays
- Studio design critiques on Thursday
- Tuesday discussion/“studio” for project work w/ teaching staff (start next week)
- Readings
- All material is (will be) online
  - slides, exercises, readings, schedule
  - <http://www.cs.washington.edu/cse441>
- Have fun & participate! Small for a reason

## Project Description

- We will continue work on projects from CSE440
  - we will give you a list to choose from
- Groups
  - 4 students to a group → 3-4 groups
  - groups meet with teaching staff every 2 weeks
    - Nikki will help schedule these meetings
  - industrial mentors will also meet with teams
- Cumulative
  - apply several HCI methods to a single interface

## Project Process Overview

- **Medium-fi Prototype (using tools) #1**
  - Heuristic Evaluation of current design
- High-fi Prototype (using tools) #2
  - Online Usability Study
- Interactive Prototype #1 (code)
  - Usability Study (“lab”)
- Interactive Prototype #2 (code)
- Final presentations & project fair with industry guests

## Schedule on web

## Administrivia

- Roll
- James’ office hours
  - Mon, 2:30-3:30 PM (642 Allen Center)
  - online (send Nikki preferred IM IDs)
  - email last name at cs.washington.edu for appointments at other times
- Nikki’s office hours
  - Wed., 10:30-11:30 AM (605 Allen Center)
  - email nblee at uw.edu

## Books

- *Universal Principles of Design* by Lidwell, Holden, & Butler
  - I'll give you copies of the ~5 chapters we will use
- We will also hand out other papers, give you web links, & refer to slides
- Other recommended refs on web page

## Assignments

- Individual
  - 1 written + 6 short studio tasks + one talk
- Group
  - 7 written assignments
    - 3 group presentation/demos with the write-ups
  - team web site graded
  - all work handed in on Web (group & individual web site)

## Grading

- No exams
- Individual assignments (30%)
- Group project (55%)
  - demos/presentation (group component)
  - project write-ups and exercises
  - team web site
  - ratings given by other team members & class
- *In class participation (15%)*

## Tidbits

- Late Policy
  - no lates on group assignments
  - individual assignments lose one letter grade/day
- Cheating policy
  - will get you an F in the course
  - more than once can get you dismissed
- More information (syllabus/schedule/slides)
  - <http://www.cs.washington.edu/cse441>

## Introductions

- Name
- Major
- What you want to get out of the class

## Teams

- Start with prior top projects in 440
- Give me your preferences & we assign
  - try to balance skills, etc.
  - teams of 3-5
- Proposed projects
  - [CarbonShopper \(CSE 440, Winter 2012\)](#)
  - [Husky Crime Guide \(CSE 440, Autumn 2011\)](#)
  - [Pause \(CSE 440, Winter 2012\)](#)
  - [StyleEye \(CSE 440, Winter 2012\)](#)
  - [upLift \(CSE 440, Winter 2012\)](#)

## Summary

- Thursday
  - Studio assignment #1 – Gestalt Principles
  - Read [Gestalt Principles](#) from *Universal Principles of Design*
  - Turn in online to Nikki so we can access from web directory
    - should all have CSE accounts