Mobile Phone Programming

“From Idea to Impact in 16 Weeks”

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http://mikechen.com
Why you should **not** take this class

You need someone to whip you to get work done

You don’t like working with other people

You’re afraid of giving presentations (unless your partner can cover for you)
PC vs. Mobile Phone

PC

Mobile Phone (4B)
Worldwide Shipment (2008)

- Mobile Phone (1.2B): 80%
- Notebook: 10%
- PC: 10%
• Apple App Store
  • Since July 2008
  • 70000 apps
  • 1.5 Billion downloads in 12 months

• Android Market Place
  • Since Oct 2008
  • 12000 apps
Mobile Phones in Asia (2008)

- Hong Kong: 160%
- Singapore: 132%
- Taiwan: 107%
- South Korea: 93%
- Japan: 71%
- China: 48%
- Finland: 127%
- USA: 88%
Mobile Phones in Taiwan

- Taiwan: 24.7M (107%) in 2008

- Infrastructure:
  - 4 major carriers
  - 3G, 3.5G, Wi-Fi

- Many manufactures:
  - HTC, Asus-Garmin, Acer, Foxconn, OEM/ODMs
Mobile Platforms

- Pre-2008
  - Symbian, Windows Mobile, RIM Blackberry
- 2008
  - iPhone 2.0
  - Android 1.0
- 2009
  - iPhone 3.1
  - Android 1.6
  - Palm WebOS
Total Sales: Android vs iPhone OS

- iPhone (30B) 57%
- iPod Touch (20B) 38%
- Android (3B) 6%
Class Format

• Monthly guest speakers (11am-noon)
• Weekly lectures
  • 4 - overview + mobile design topics
  • 6 - Android
  • 3 - iPhone
  • 3 - project presentations
Team Project

• About 20 teams
  • 2-3 person per team
  • A few industry mentors
• 1 phone (on loan) per team
  • Android Hero, iPod Touch, or iPhone
• Access to Macs
  • @ Mobile Phone Lab (428)
Homework Grading

• 4 individual homework (10% each)
  • 3 possible scores: 10, 5, 0
  • #1 is due next Tue
  • #2 & #3 on Android simulator
  • #4 on Android phone
Project Grading

- Team project (60% + up to 10% bonus)
  - Concept/scenario presentation (10%)
  - Design/wireframe presentation (10%)
- Final 2 weeks:
  - Poster session (10%)
  - # of sales in Android Market / App Store (10%)
  - Presentation: industry judges (20%)
- Bonus points (2%) for the top 3 teams for each milestone
Homework #1

• Due 11:59pm, Tue, 9/22

• 2 parts:
  • 1. Questionnaire
  • 2. Create a web page w/ your own photos showing a real world problem you’d like to solve, and how you might solve it using mobile phones.
  • Details will be posted by Sat noon on course website
Homework #1 Example

- **Scenario:** want to find a good place to eat near me

- **Problem:** 會不會踩到地雷?

- **Solution:** point my phone at the restaurant, and it tells me the ratings of the restaurant + which dishes are recommended.
助教

• 吳思蔚 施淵耀 黃建璋 劉子健

• Weekly office hours @ mobile phone lab
  • Room 428
  • Access to Macs with iPhone SDK
  • Total 8 hours / week (TBA)
  • Bring your Android/iPhone/Mac questions
About Me

• Ph.D. @ UC Berkeley
• Internships @
  • IBM Research
  • Tellme Networks
  • eBay
• Intel Research Seattle
• Ludic Labs / Diddit.com (Web 2.0 startup)
My Research Areas

- **Cloud Computing**: USITS, USENIX, HotOS, ICAC, NSDI..
- **Mobile**: HotMobile 2006, Mobisys 2006, Mobisys 2007
- **Ubicomp**: Ubicomp 2006 x 3, Ubicomp 2007
Example Apps

• http://www.apple.com/iphone/gallery/ads/
• http://www.apple.com/ipodtouch/gallery/ads/
• http://www.youtube.com/watch?v=U2uH-jrsSxs
• http://www.youtube.com/watch?v=_yRi1chfu_c&feature=player_embedded
Idea to Impact in 16 weeks

Passion

Opportunity  Execution
Idea to Impact in 16 weeks

Passion

Opportunity

Execution
Questions?

- Do I need my own Android / iPhone?  No
- Do I need a Mac?  No
- 下學期會不會再開這堂課？  No
- 可不可以加選？  Maybe
  - Complete Homework #1 and find out on by Thur noon
- Office: CSIE 412. mikechen@csie.ntu.edu.tw
- Where’s the course web site / homework?
  - [http://mikechen.com/](http://mikechen.com/) on Sat (9/19)