ECE 1778:
Creative Applications for Mobile Devices

Lecture 5

February 6, 2013

Today

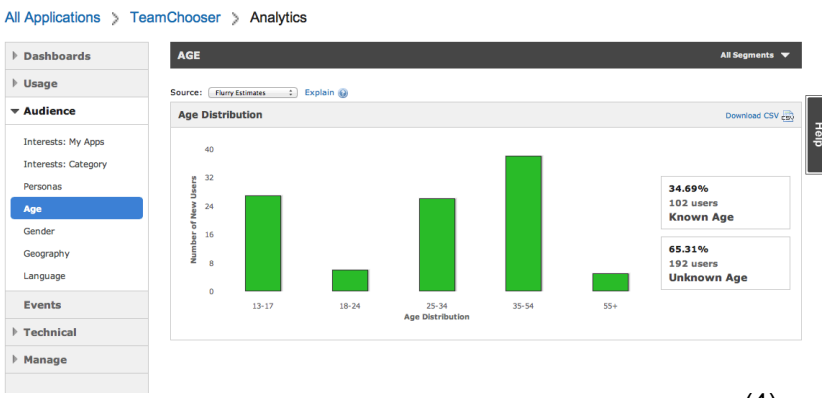
1. A Note on Flurry and Privacy
2. Logistics
3. Assignments P3 and A3
4. Proposal Discussions

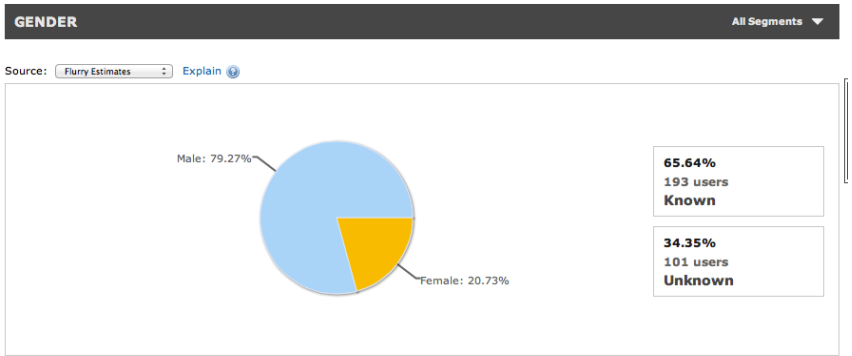
Flurry and Privacy

Recall

- Flurry's software lets you easily instrument your app to to get analytics to see how much it is used (from Lecture 3)
  - AND sends back **anything** the developer wants
  - Exciting & useful for developers
  - Appalling from the user perspective – wrt privacy

- Recent news indicates, in the USA, moves to protect user privacy





From Last Saturday's New York Times

http://www.nytimes.com/2013/02/02/technology/ftc-suggests-do-not-track-feature-for-mobile-software-and-apps.html

"F.T.C. Suggests Privacy Guidelines for Mobile Apps"

- In a strong move to protect the privacy of Americans as they use the Internet on their smartphones and tablets, the Federal Trade Commission on Friday said the mobile industry should include a do-not-track feature in software and apps and take other steps to safeguard personal information.

- Also Fines **Path** app $800K for under-age information tracking

From ‘Fierce Mobile’

- http://www.fiercemobilecontent.com/story/ftc-fines-path-800000-privacy-breach-issues-new-mobile-guidelines/2013-02-01?utm_medium=nl&utm_source=internal
- The FTC's mobile guidelines include different best practices for app developers, mobile marketers, mobile platforms and app trade associations.
- "The mobile world is expanding and innovating at breathtaking speed, allowing consumers to do things that would have been hard to imagine only a few years ago," said FTC Chairman Jon Leibowitz. "These **best practices will help to safeguard consumer privacy and build trust in the mobile marketplace**, ensuring that the market can continue to thrive.”
- The FTC's Mobile Privacy Disclosures report suggests that mobile **platforms** implement a **Do Not Track (DNT)** mechanism for mobile users, to allow users to opt-out of being tracked by ad networks or other third-parties. In addition, app developers are encouraged to create clear privacy policies so that apps can obtain express consent before accessing or sharing user information.
- "Today's enforcement from the FTC on mobile privacy is the first major step from a government entity to address **neglectful and malicious practices** that compromise consumer privacy in the mobile app world. Now, the responsibility to honor these recommendations falls on the entire technology industry, from App Stores to developers and solution providers like IP Lasso," stated IP Lasso, a startup that monitors apps.

Fierce Mobile

- Fierce Mobile is a good daily newsletter on all things mobile, by the way
- To Subscribe: http://www.fiercemobilecontent.com/signup?sourceform=Viral-Tynt-FierceMobileContent-FierceMobileContent

Logistics

Assignments

- A3 and P3 are out today – will discuss later in lecture
- A4 and P4 are also available, won't be due until Feb 26

- A2 and P2 have are being graded, not done yet

Project Time Line

1. Forming Groups
2. **One-Page Proposal;** all approved, discussed today
3. **Project Plan;** due Yesterday (in most cases)
4. Plan Presentations- next week
   - February 11 & 13
   - NOTE EXTRA LECTURE Monday Feb 11, 6-8pm, MP 137
5. Special Lecture on User Experience Design February 27th
   - David Offierski and Michael Clarke from Konrad Group
6. Spiral 2 & Spiral 4 Presentations
   - 2: March 6/13 4: March 20/27
7. Final Presentations
   - Weeks of April 3 & 10
8. Final Report Due April 12th

Project Plan Presentations

Next Week in 2 Classes:

Monday February 11th 6-8pm

Wednesday February 13th, 9-11am

MP 137

Plan Presentations Start Feb 14

- Formal Presentation
  - Using PowerPoint, Keynote, PDF or OpenOffice
- You will not know in advance if you're presenting on the 11th or 13th, to be fair, so come prepared to talk
  - Unless you've expressed a hard constraint to me, already (or soon)
- Send the presentation to me by email by **Monday Morning, February 11th, at 12 noon**
  - jayar@eecg.utoronto.ca

Time Limit

- **Five (+1) Minute Time Limit**
  - I will start timer that makes annoying sound when done, and expect you to be finished within 10 seconds after that.
  - **Omit needless words**
- **Three Minutes for Questions**

Plan Presentation Contents

The Essence of the Plan submitted yesterday:

1. Reprise Goal, make more precise (What & Why)
2. Give Mock-ups of What User Sees
3. Block Diagram of Code & explain
4. Statement of Risks/Issues
5. What do you need to learn that you don't know
6. Appers
   - 1 extra minute (for a total of 6), for Apper to say how this fits into their field & what their contribution will be

Notes on Time Limit & Clarity

- Time Limit is both serious and important
  - To this course and your ability to communicate going forward
- How many slides can there be in 5 or 6 minutes?
- How much can go on a slide?
- Are pictures good things in presentations?
- Do you start with the details or the big picture?

How Do You Know if Presentation is Good?

- Practice it, standing up, in front of:
  - First, no-one
  - Then, a few others
  - Not too much, though, either, as it shouldn't sound memorized

- **Time it**
  - if too long, cut it
  - Get to the point quicker

- Gulak's law: "You can describe anything to anyone in any amount of time"
  - Just have to pick the right level of abstraction

How Do You Know if Presentation is Good?

In Practice:

- Listen to what you are saying
- Does it make sense **listening with the ears of the audience?**

Who is Your Audience?

- A mixture of technically-literate and people with expertise in some another area [different from your own!]
- Make sure the lay people know **what** you're doing - the goal
- OK to go somewhat technical after that, but don't assume we're all expert in every sub-field of ECE and CS

Assignments P3 and A3

Due Next Week

Assignment P3 – for Programmers

Location, Motion Sensors and Image Capture

- Learning how
  - to determine out where the phone is, geographically (GPS)
  - how it is moving (accelerometer)
  - how to use the camera to capture images

1. Read the relevant parts of
   - **Murphy** & Android Development site (Android)
     - Murphy doesn't have good coverage of sensors
     - Previous lecture has notes on sensors
   - or **Mark, Nutting, LaMarche & Olsson** (iPhone)

Assignment P3 – for Programmers

- In response to being shaken,
  - phone takes a picture 1 second after the shaking stops, and
  - records the GPS location at the same time.
- Each location should be stored in a growing list;
  - when the user views the list item, your application should display the picture taken at that location.
  - The list should be maintained over separate invocations of the app (i.e. stored in a file)
  - it should be possible to delete a list item, which would remove the corresponding image in the file system.
- Due next week,
  - February 12th, 6pm, penalty for being late

Assignment A3 – for Appers

- Recall: one goal of course is to give experience in reaching across disciplines
- Anticipate that Appers will be teaching Programmers the **language** of their discipline, and the basic concepts
  - Please, programmers, ask questions – get jargon explained
  - **AND** vice-verse.

- Assignment A3 is an experiment in bringing Appers a little into the world of programming & engineering
  - To give you practice talking to each other

Basic Idea of A3

- Apper: Choose from one of 5 technical areas listed **that you are not already familiar with, that your programming partners are:**

1. Fast Searching
2. Databases
3. Digital Signal Processing
4. Optimization
5. Internet Communication

Then – Part 2

- Spend an hour with your partners, learning about this area, and take notes.
  - Don’t use any other sources of information
- Write up those notes & submit this Friday (Feb 8, 6pm)
  - 500 words + pictures

Then – Part 3

- Pursue a deeper understanding of the topic, via Internet
- Write another 500 words, due Tuesday February 12th, 6pm
  - Do a better job of describing the topic; add some nuance.
- Offer some additional commentary on your view of this learning process
  - how it went
  - how much you learned from Part 2 vs. Part 3,
  - what would have made it better

Proposal Discussions, continued

One Member from Each Group

- Please stand up, and describe your proposal

- What & Why
  - Describe the idea, and its motivation
- Scope
  - Give a good sense of functionality – what is involved
  - Show that you've thought about the pieces

- Apper: how it relates to field/expertise