CSC2231
Online Social Networking Systems

Stefan Saroiu
Computer Science
University of Toronto

http://www.cs.toronto.edu/syslab/courses/csc2231/07au/

What this course is about
• A course in an emerging topic of systems research
  – Build large-scale systems that enable mass communication in a social network
  – Online social networking systems: wide-area distributed systems (including P2P, Web systems), search, content delivery, security
• Familiarize ourselves with papers in the area
  – Helps you go through the process of exploring emerging area
  – Helps you read and review papers
  – Helps you do a research project on a hot topic

What this course is not about
• Social networking is a research topic in many fields
• In this course, we will not examine:
  – Theoretical properties of social networks
  – Developing models for explaining + analyzing social networks
  – Examining the social aspects of social networks
• Instead,
  – Build large-scale systems that enable mass communication in a social networking fashion
• This is an advanced systems course!

What your role in class will be
• You have four jobs:
  1. Read and review 2 papers per class
     • Submit review two hours before class
  2. Actively participate in class discussions
     • Come to class with questions, ideas, thoughts
  3. Prepare at least one research paper presentation
     • Quality must be similar to a publishable short paper
  4. Work in groups on a research project

How to submit reviews
• Demo

Paper Presentation
• Send me your preferences on the papers
  – You will be assigned a paper based on your preferences
• Presentation will not last more than 30 minutes
  – I will stop your presentation after 30 minutes
• Presenter in charge of driving 20 minutes of discussion
• Presenter expected to setup a meeting with me on Tuesday before the presentation
  – This is not a requirement
  – It doesn’t affect your grade, but it could affect your presentation
Research Project

• Form groups
  – It’s unlikely I’ll accept a one-student group
  – Deadline is in two weeks Thursday 10am
• Choose a project topic
  – Submit project proposal
  – Deadline is in three weeks Thursday 10am
• Submit two project reports
  – First report due on November 1st
  – Second report due on November 29th
• Presentation due early December
• Final report

More Administrivia

• Class times and location
  – Thursdays 11am to 1pm in Bahen 5256
• Office hours
  – ???
• Grades
  – Research project 50%
  – Research presentation 25%
  – Paper summaries 15%
  – Class participation 10%

The List of Papers

• There is a paper assigned for today. Please read it.
• …

How does a research topic become “hot”?

• Systems research typically driven by technological changes
  – Hardware changes:
    • Distributed shared memory
    • Faster processors (Moore’s Law)
    • Bigger and cheaper memory
    • Broadband access networks (fast home access)
    • Multicore processors
  – Software (+ algorithms) changes:
    • Video and audio codecs (MP3, AVI, DivX)
    • Forward erasure codes
    • Better programming languages (type-safety, GC, etc…)
Is online social networking hot?

• Why?

Online Social Networking Systems

• Facebook, MySpace, LinkedIn, Orkut
  – Attract tens of millions of users
    • Facebook has more than 1 million accounts from GTA alone
    – Some are among top most visited sites in the world
    – Most of these sites did not exist a few years ago
  • Technology changes:
    – Personal cameras, camcorders <-> lots of personal media
    – Fast access networks <-> broadband

  • Our goal: identify new challenges in building large-scale systems for managing, searching, delivering personal data in a social network?

Next Class

• Next week’s class is cancelled

• See you in two weeks
  – Two papers to read
  – Two presenters will be assigned
  – Reviews due by 9am

• E-mail group members
  – Also due by 9am