Logistics

CS5700 Fall 2019

Course goal and contents

You will learn

- Fundamental principles and terminology
- How the Internet works
  - TCP/IP, DNS, HTTP, etc.
- Perspectives and how pieces fit together
- Project-centric
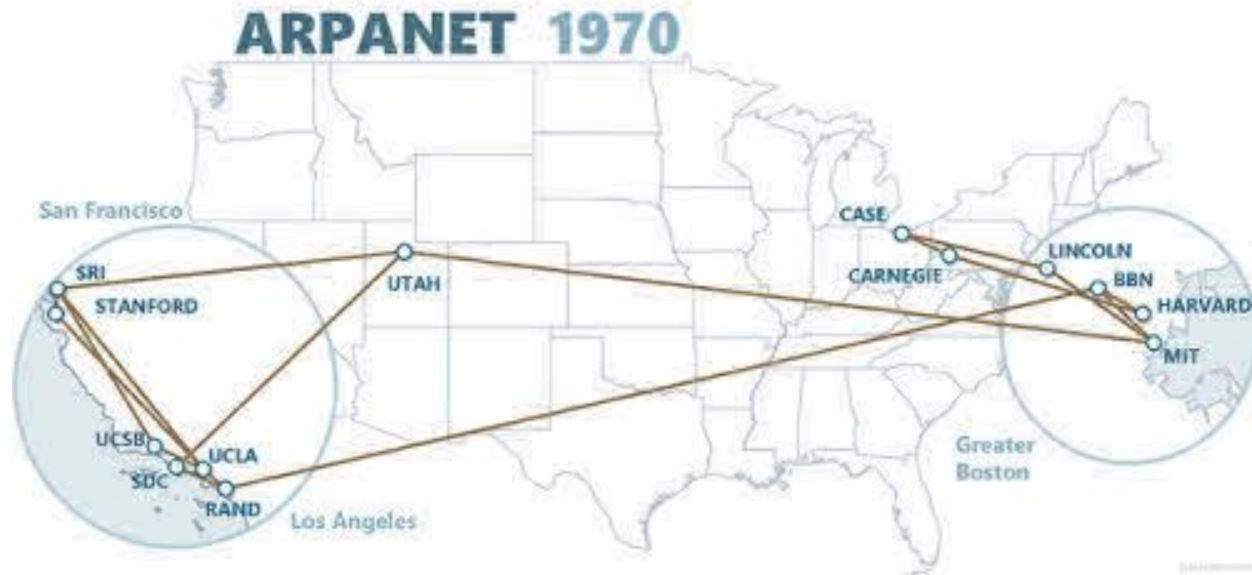 - Network programming
  - Protocol analysis using Wireshark

Why do you care?

Computer networks are ubiquitous

- Web search
- Social networking
- Video streaming
- Shopping
- Maps
- ...

Growth of the Internet

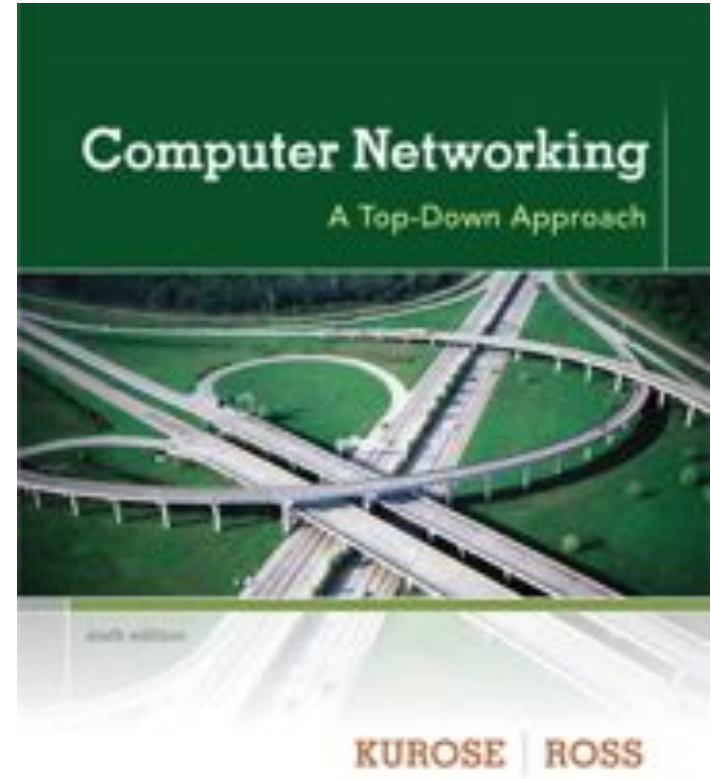ARPANET 1970

Growth of the Internet

Day to day work

- Basic networking knowledge is essential
  - Distributed computing, cloud
- Fundamentals and design principles apply to other aspects of computer science
  - E.g. reliability in unreliable environment

Optional textbook

Computer Networking
by Kurose & Ross 7th Ed

Teaching style

- Interactive
  - Please ask questions
- Expect changes
- Top-down approach
  - Start from application layer

Expectations from you

- Basic programming skills
    - Python
    - Basic knowledge on data structures
    - Basic understanding of operating systems
- Major requirement is desire to learn

Grading

- Programming assignments (70%)
  - ~8 assignments
  - Python 3
- Protocol analysis using Wireshark (20%)
  - ~8 labs (e.g. HTTP, DNS)
- Pop quiz (10%)

Resources

- Course page
  - Signup: piazza.com/northeastern/fall2019/cs57002
  - No private/anonymous post
- OH
  - Jiatong Li [T 3-4 pm]
  - Weiduo Sun [Wed 4-5 pm]
  - Han Zhang [Th 2-3 pm]
  - Zhifeng Sun [Fri 10-11am]

Questions?