M.Eng track in CS and Medicine

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Computer Science & Radiology
Overview

• Cornell’s medical school (“Weill Cornell Medical College”) is in Manhattan
  – Upper east side, 68\textsuperscript{th} and York
• I hold a joint faculty appointment
• There is an opportunity for students to work on projects in this area
  – No medical background is required!
  – Will fulfill M.Eng project requirement
Logistics

- Fall 11: students in Ithaca identify projects of interest to radiology faculty
- Spring 12: selected students are in NYC
  - Taking CPT (no tuition)
  - Radiology pays housing plus a modest stipend
- Fall 12: students return to Ithaca to complete their degree
How are students selected?

- This is the second year of the track
- Last year 3 students applied and radiology funded all 3
- If you can find a good project this fall, the odds of funding are favorable
  - And there are lots of good projects
- However, I can’t make any promises yet
Required & relevant courses

- Required: **CS7594**, “Seminar on CS and Medicine”
  - 1 credit S/U, meets W 4-5 in 224 Weill
- Relevant: **PAM2350**, “The U.S. Health Care System” 3-credit course
  - Human Ecology: Policy, Analysis & Management
  - 3 credits, meets Tu Th 1:25-2:40 in 200 Baker Labs
- Relevant: CS courses in almost anything (vision, AI, web programming, databases, etc.)
Software projects in CS5150

- SHIFT: Health Care Micro-integration
  - Mobile app for integration
- ALT - Alternative Open Source Imaging Mobile Viewer
  - App for viewing exams
Topics of interest

• Image processing and computer vision
  – Building better images and analyzing them

• Data mining and machine learning
  – Looking for patterns in medical data

• Natural language processing
  – Analyzing text reports from radiologists
More information

- Talk to me or email me (rdz@cs, 4158 Upson)
- There may be an information session in a few weeks, announced by email
- A few students have already worked on such projects, feel free to talk to them
  - Akshay Bhat in particular