CS 5 Green Finale

Looking back! Evals, Ideas

Looking ahead? Options…

CS 5G Final lecture now!

I’ll be back…

but that’s my line!

CS 5, on the verge of termination

CS 5G Final Projects

- Fri 3-5pm: Open lab to finish projects
- due Fri 5pm (Sat w/ Euro)
- office and grutoring hours through then…

CS 5G Final Exam

- this room, Thu 12/14, 2-5pm
- comprehensive
- 20-min practice problems on course website
- two 8.5x11 sheets front and back (that you prepare yourself) permitted
- office hours
  - Prof Wu: Wed, 12/13, 2-4pm
  - Prof Bush: pick one (on worksheet)
    Wed 12/13 OR Thu 12/14, 10am-12pm
Uncomputable Functions

sometimes an algorithm simply does not exist…

more precisely: every possible algorithm contains bugs!
Meaningful Functions?

Input → Algorithm → Output

but nearly all meaningful functions are computable…
CS 5’s (Project) Examples

Input → Algorithm → Output

Keeping Strains Straight → optimal amplicons
Regulatory Network → optimal network
Picobot Evolution → optimal program

balance of utility & creativity & aesthetics?
Meaningful Functions?

Input ➔ Algorithm ➔ Output

Fortunately, nearly all *meaningful* functions *are* computable…

*but this doesn’t mean we know how to compute them (yet)!*
CS 5 Green: the past...

Concepts
- functions, variables
- conditionals, loops
- recursion, use-it-or-lose-it
- lists, dictionaries, trees
- assembly (Hmmm)
- classes and objects
- computability

Applications
- Picobot
- Gene finding
- Read mapping
- Alignment
- RNA Folding
- Phylogenetics

Future CS?  Future Bio?
**Principles of CS**

- Logic & Computability: CS 81
- SW Engineering & Data Structures: CS 70, 121

**CS for Insight**

- CS 35

**Biology + CS**

- Intro to Biology, Computational Biology: Bio 52, MCB 118a/b, Bio 188

**Interfaces**

- User Interfaces, Graphics, Animation: CS 124, 155, 157

**AI**

- AI, Neural Networks, Computer Vision, Robotics: CS 151, 152, 153, 154

**Systems**

- Compilers, Programming Languages, Networking, Operating Systems, Computer Architecture: Eng 85, 155, 158 & CS 125, 131, 132, 134, 136

**Theory**


**Beyond classes?**
Thank you for joining CS5G!

Good luck on all finals (projects, exams, papers...)

Final Projects: due **Friday** 5pm…

Exam: **Thu, 12/14 @ 2pm**

Here in Shan B442