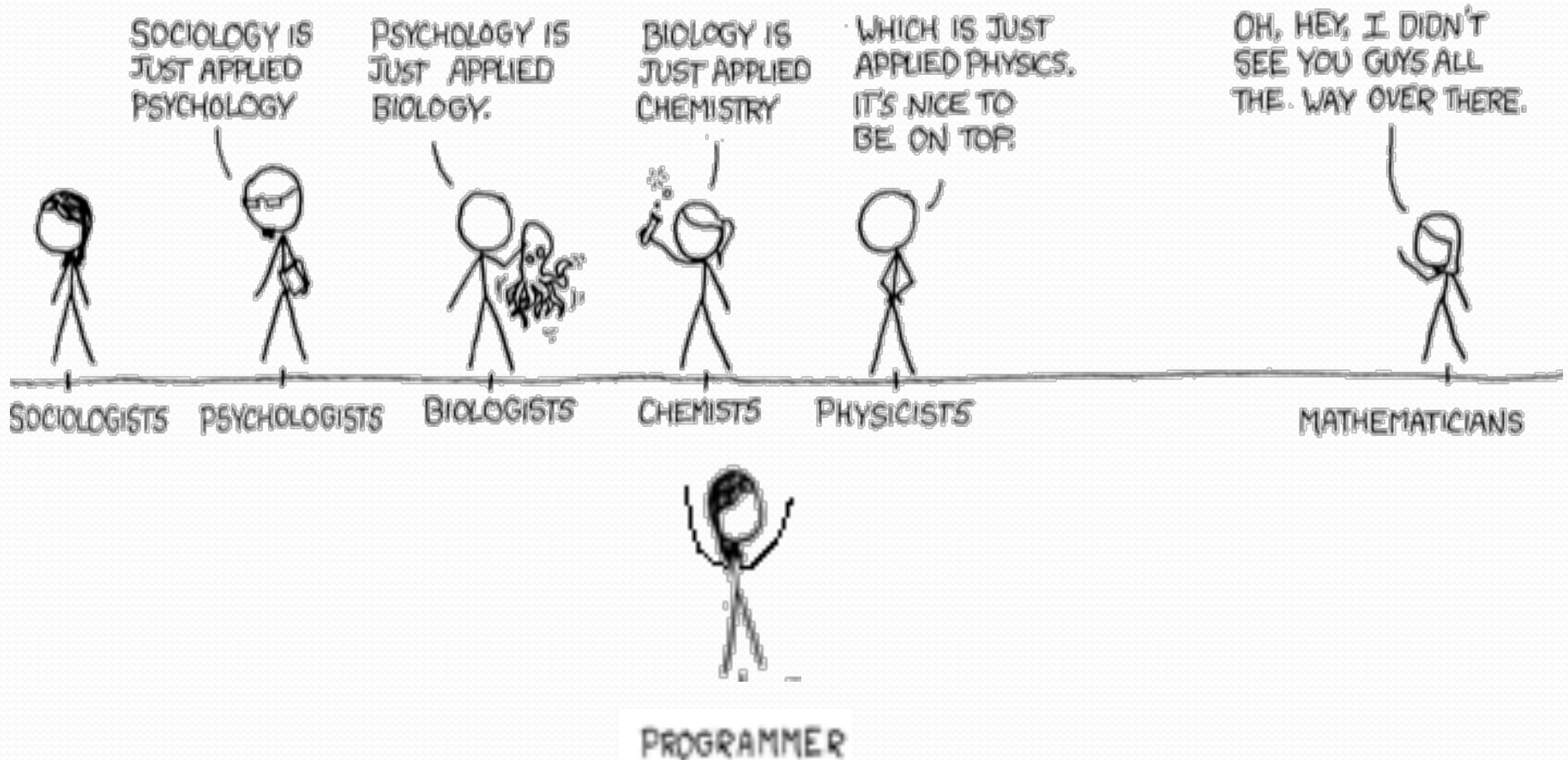


Building Java Programs

Parting thoughts

FIELDS ARRANGED BY PURITY

→
MORE PURE



Implementing abstractions

Procedural

- Building block: method
- Steps of computation
 - Task-based

Object-Oriented

- Building block: class
- Reusable data entities
 - Modeling
- Appropriate for large-scale projects

<http://docs.oracle.com/javase/7/docs/api/>

Final exam

- Procedural: algorithmic problem-solving
 - Array mystery
 - Reference mystery
 - File processing
 - Array programming
- OO: applying rules, meeting a specification
 - Inheritance mystery
 - Reference mystery
 - Critter

What's next?

- Arrays are great, but how else can I organize data?
 - CSE 143 (then 373/332)
- How do I write more complex algorithms?
 - CSE 143 (then 417/421)
- How do computer scientists think about the world?
 - CSE 143 honors section
- Console apps are neat but I hear the web is the future?
 - CSE 154

What can CS help with?

UW or UW-affiliated projects

<http://www.cs.washington.edu/research/>

<http://www.cs.washington.edu/education/ugrad/academics/capstone.html>

<http://norfolk.cs.washington.edu/htbin-post/unrestricted/colloq/search.cgi>

Making cool movies



<http://www.cs.washington.edu/research/ap/films.html>

Shopping



Getting good deals

No regrets.



<http://news.cs.washington.edu/2011/11/25/new-york-times-on-oren-etzioni-and-decide-com/>

Free and Accurate Airfare Predictions

Find out if you should buy now or wait. [Learn More](#)



Buy Now.
Fares will rise.



Wait.
Fares will drop.

Protect Your Airfare with Fare Guard

Buy later with peace of mind for only \$9.95. [Learn More](#)

Flying autonomously



http://www.youtube.com/watch?v=E7X0_6o9J10

Mind control



<http://www.youtube.com/watch?v=qEv820jJgDY>

Catching the bus



The screenshot shows a mobile application interface for a bus tracking service. At the top, the status bar displays 'AT&T', signal strength, Wi-Fi, and the time '12:38 PM'. Below the status bar, there's a header with 'Map' on the left, 'Updated: 12:38 PM' in the center, and a refresh icon on the right. The main content area is titled 'E Pine St & Summit Ave' with 'Stop # 11140' below it. A list of bus routes follows, each with a route number, destination, arrival time, and delay status. The routes are: 49 to University District (12:35 PM, 7 min late, -2), 11 to Capitol Hill, Madison Park (12:35 PM, 14 min late, -2), 10 to Capitol Hill, Broadway (12:35 PM, 12 min late, -2), 10 to Capitol Hill, Broadway (12:39 PM, 1 min delay, NOW), 49 to University District (12:46 PM, 3 min delay, 8), 11 to Capitol Hill, Madison Park (12:53 PM, 2 min delay, 15), and 10 to Capitol Hill, Broadway (18). At the bottom, there's a navigation bar with icons for Map, Bookmarks, Recent, Search, and Details.

| Route # | Destination | Time | Delay |
|---------|----------------------------|----------|-------------------|
| 49 | University District | 12:35 PM | -2 (7 min late) |
| 11 | Capitol Hill, Madison Park | 12:35 PM | -2 (14 min late) |
| 10 | Capitol Hill, Broadway | 12:35 PM | -2 (12 min late) |
| 10 | Capitol Hill, Broadway | 12:39 PM | NOW (1 min delay) |
| 49 | University District | 12:46 PM | 8 (3 min delay) |
| 11 | Capitol Hill, Madison Park | 12:53 PM | 15 (2 min delay) |
| 10 | Capitol Hill, Broadway | | 18 |

- How do we know where buses are?
- What's the best way to show information to the user?
- How do we create a service that can be accessed through phones, PCs, etc?

<http://onebusaway.org/>

Improving healthcare



3G 12:07 PM

ODK Collect > eIMCI by D-Tree

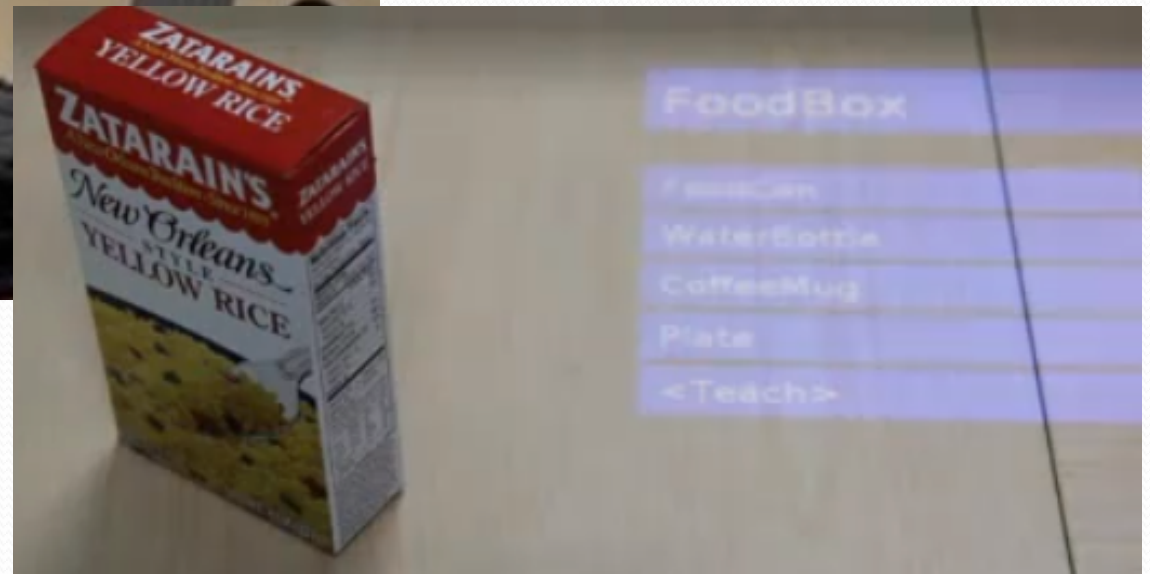
Ask about main symptoms

- Cough or difficult breathing
- Diarrhea
- Fever
- Ear problem
- Other/None of the above

<http://change.washington.edu/>

<http://tedxtalks.ted.com/video/TEDxSeattle-Gaetano-Borriello-0>

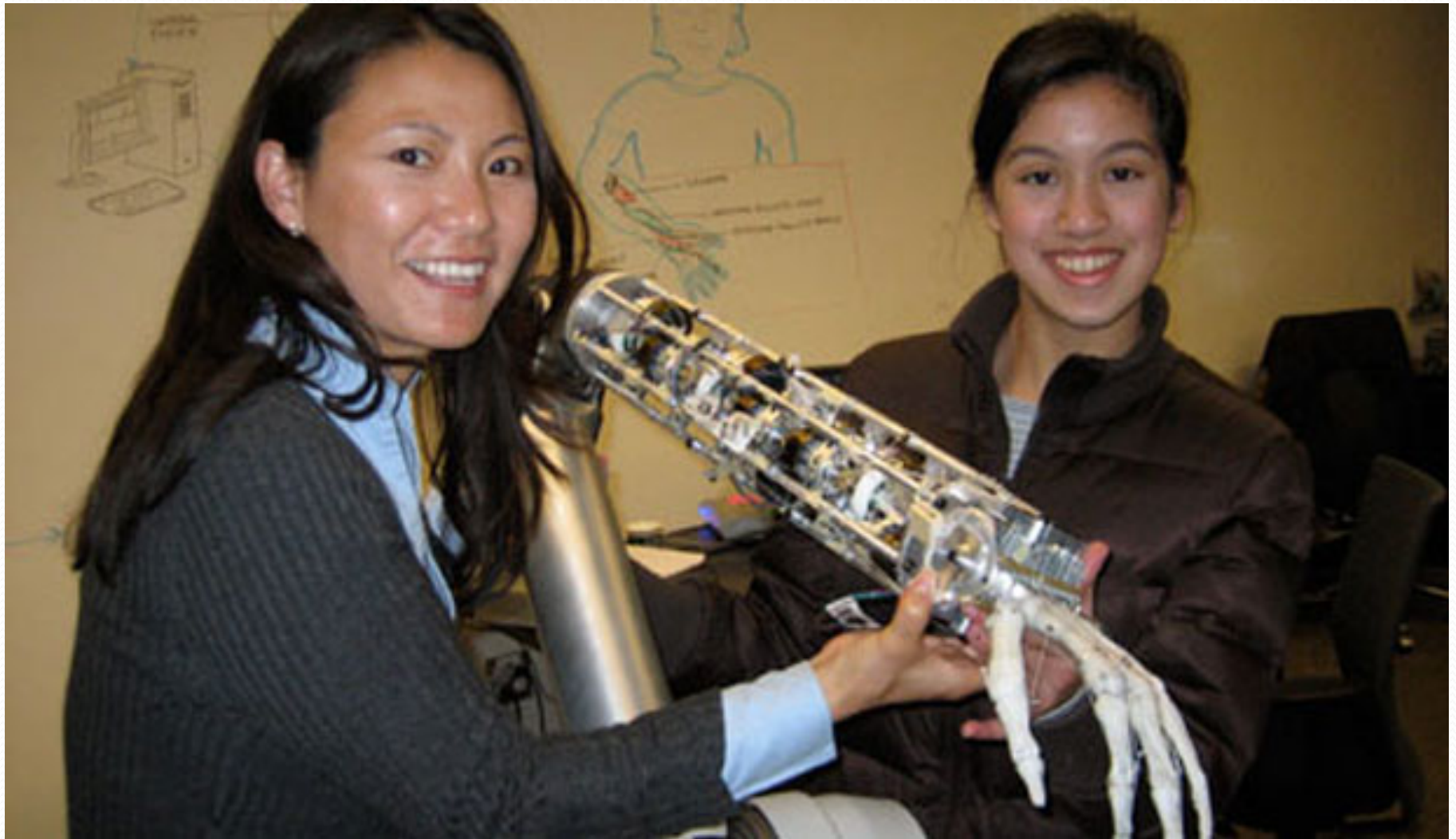
Seeing without eyes



<http://vizwiz.org/>

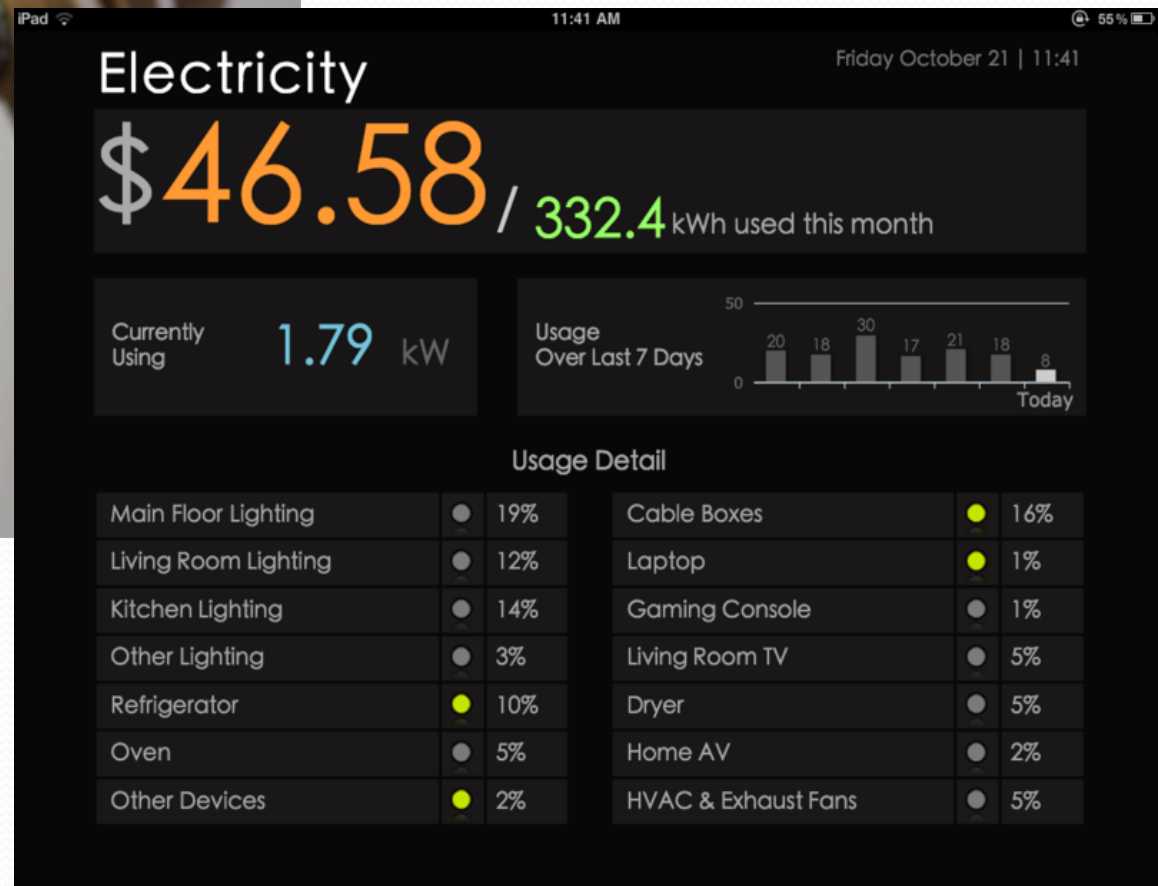
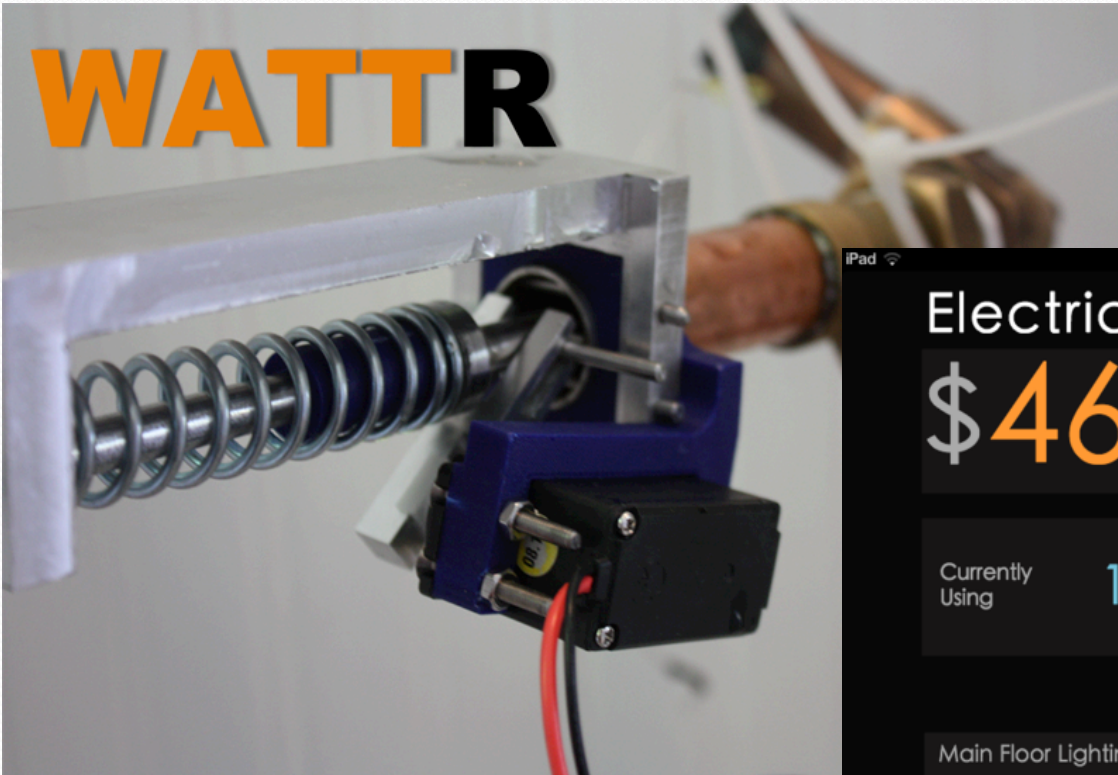
<http://rgbd-dataset/demwww.cs.washington.edu/os.html>

Enabling movement




<http://neurobotics.cs.washington.edu/>

Using fewer resources



<http://ubicomplab.cs.washington.edu>



How will CS help you reach
your goals?