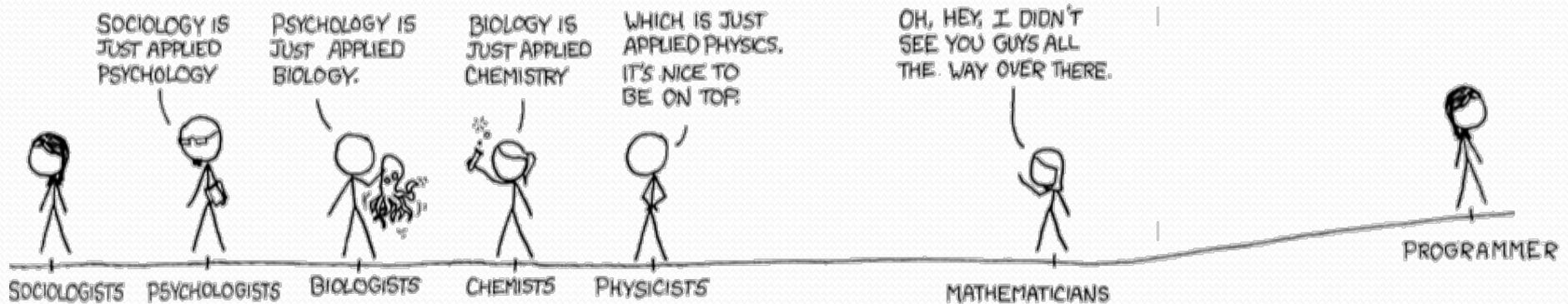


Building Java Programs

Final review, parting thoughts

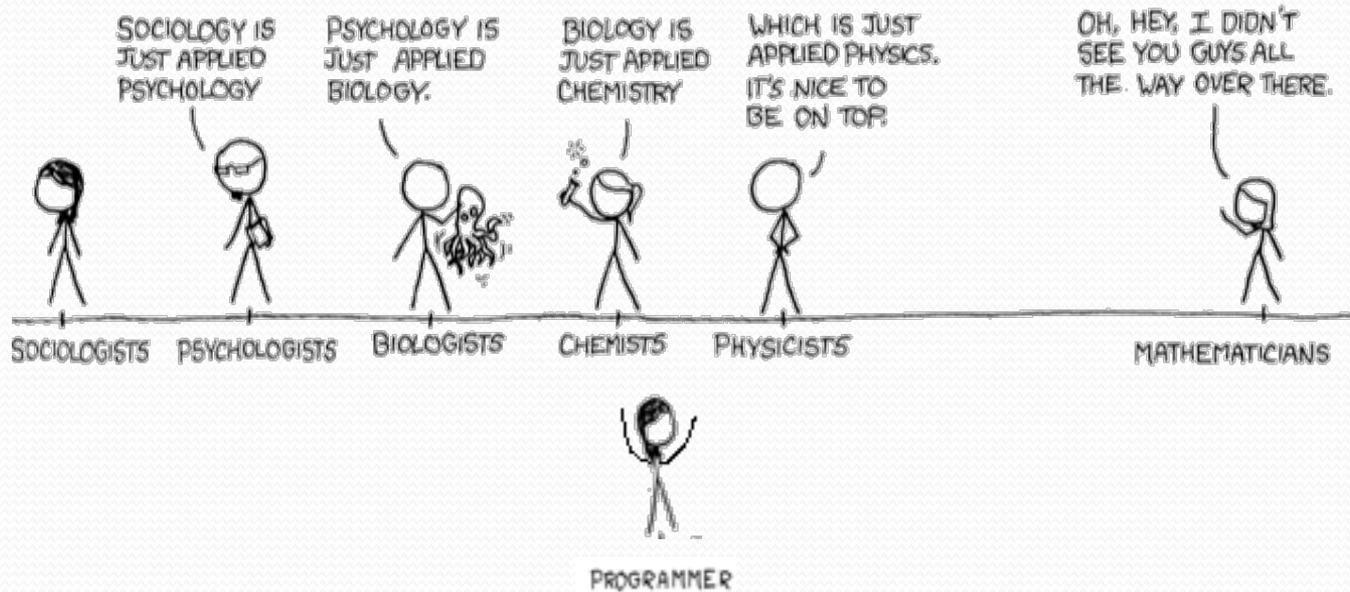
FIELDS ARRANGED BY PURITY

→
MORE PURE



FIELDS ARRANGED BY PURITY

→
MORE PURE



Evaluating programs

- Correctness – does it do what's desired?
- Reliability – does it consistently do what's desired?
- *Efficiency – does it do what's desired quickly? (see 143)*
- Maintainability – is it easy to read and add to?
- Reusability – is it generalized?

Creating abstractions

Procedural

- Building block: method
- Steps of computation
 - Task-based
- Small-scale projects

Object-Oriented

- Building block: class
- Reusable data entities
 - Modeling
- Large-scale projects

Final exam

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

What's next?

- Arrays are great, but how else can I organize data?
 - CSE 143
- How do I write more complex algorithms?
 - CSE 143
- 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 190M

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

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Protect Your Airfare with Fare Guard

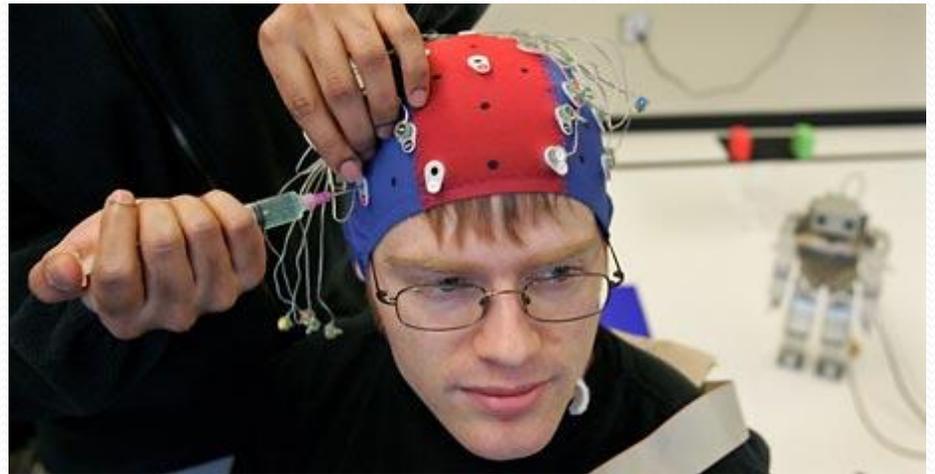
Buy later with peace of mind for only \$9.95. [Learn More](#)

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 stop. At the top, it displays the carrier 'AT&T', the time '12:38 PM', and a battery icon. Below this is a header bar with a 'Map' button, the text 'Updated: 12:38 PM', and a refresh icon. The main content area is titled 'E Pine St & Summit Ave' with 'Stop # 11140' below it. A list of bus arrivals follows, each with a route number, destination, scheduled time, delay status, and a numerical indicator. The bottom of the screen features a navigation bar with icons for 'Map', 'Bookmarks', 'Recent', 'Search', and 'Details'.

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

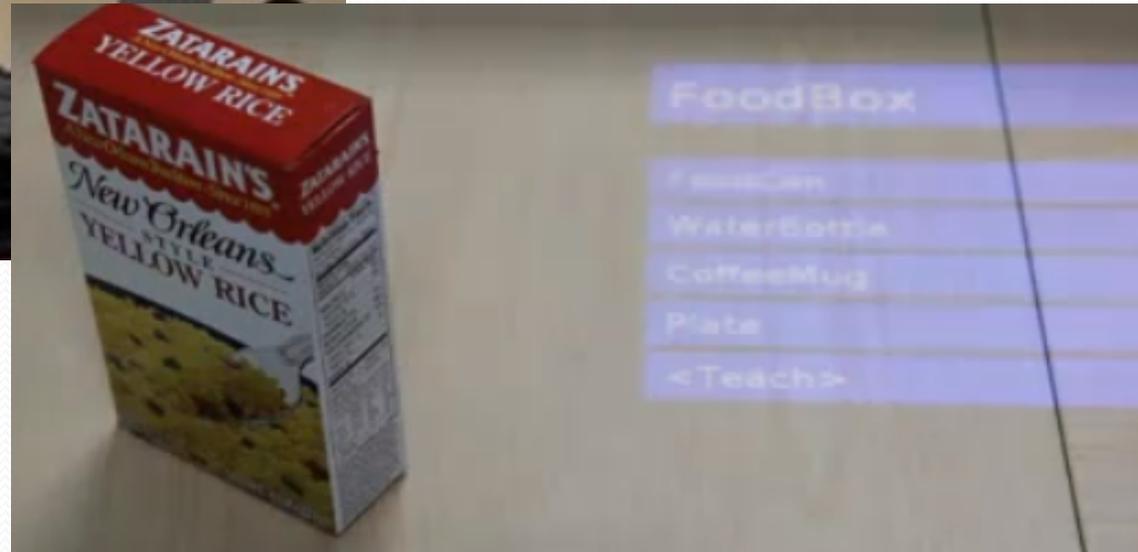
Ask about main symptoms

- 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>

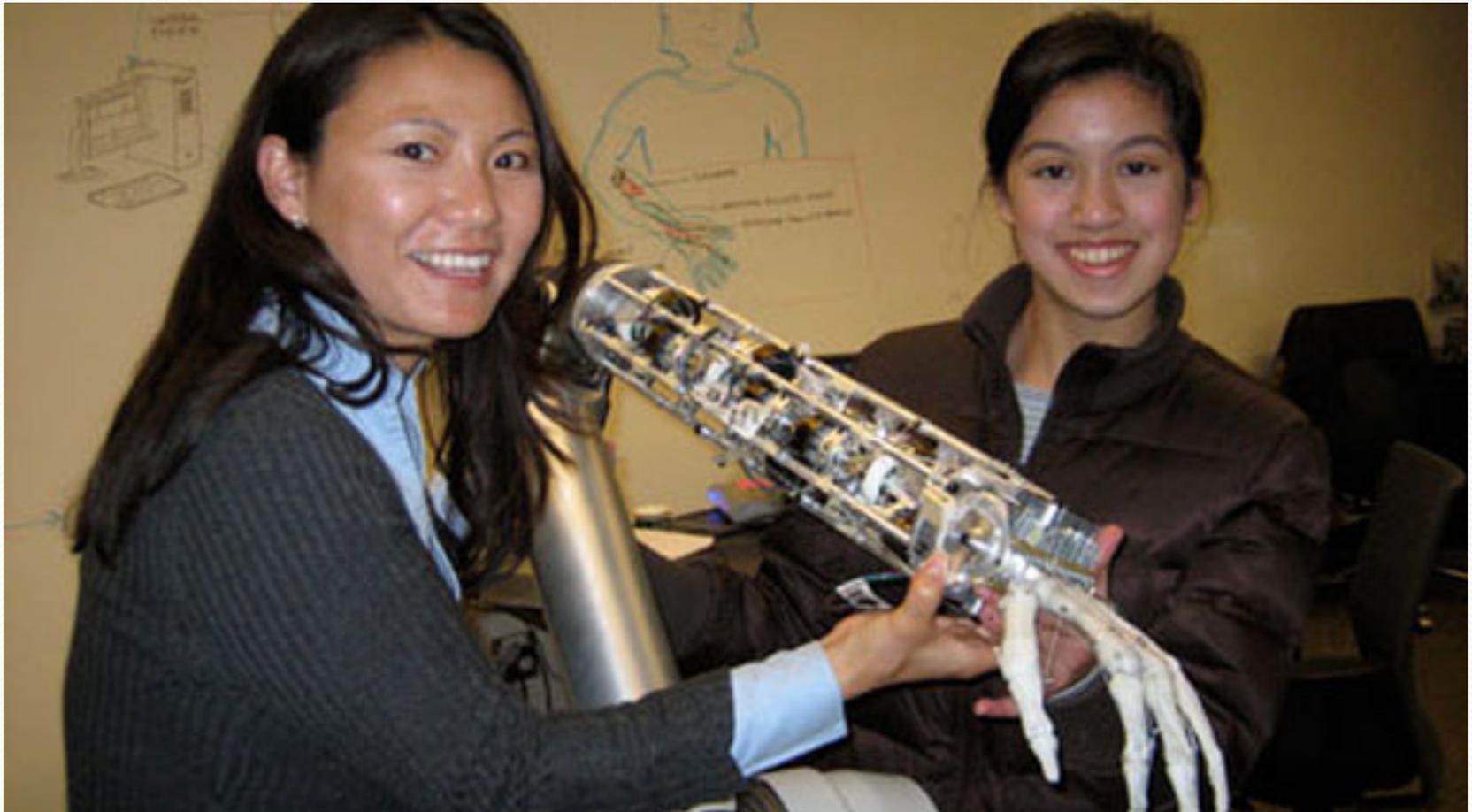
Seeing without eyes



<http://vizwiz.org/>

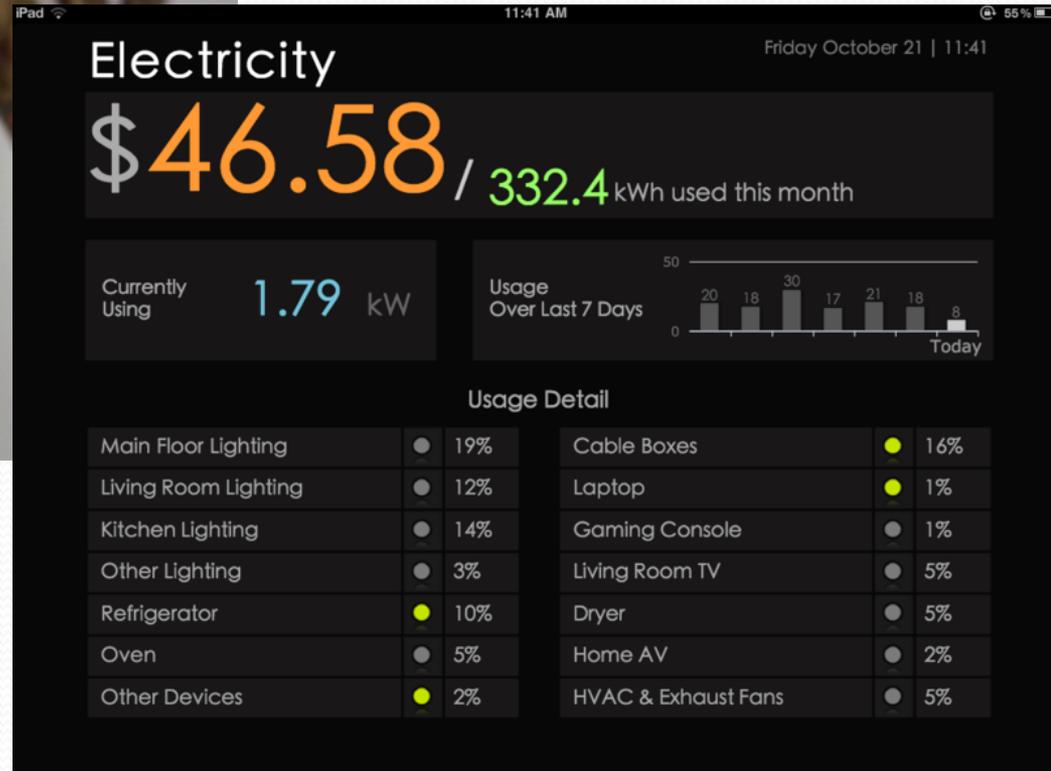
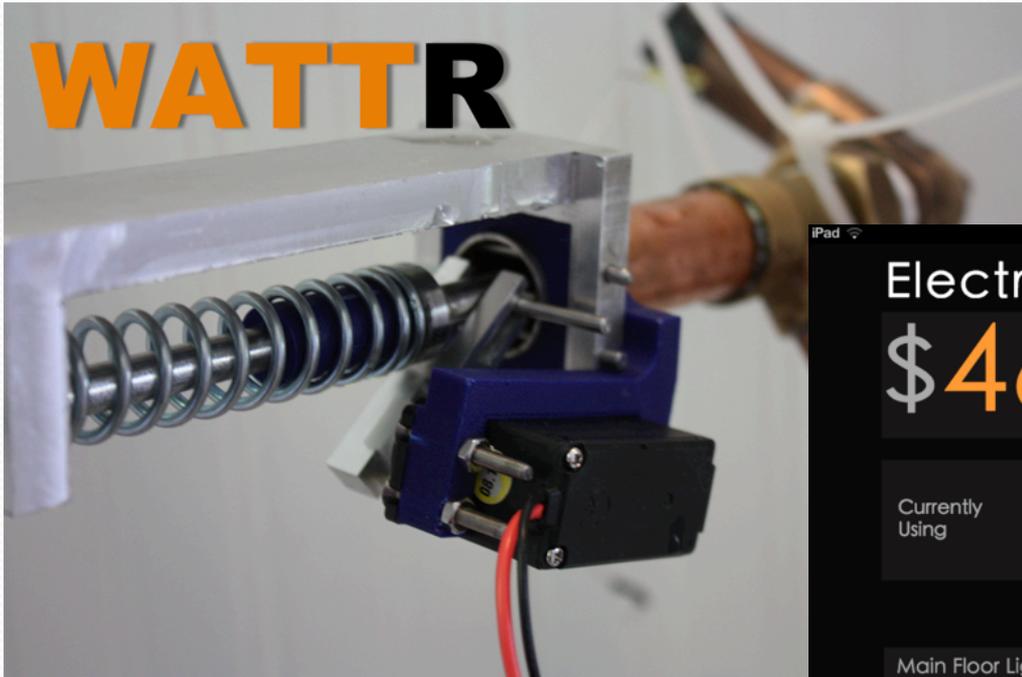
<http://www.cs.washington.edu/rgb-dataset/demos.html>

Enabling movement



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

Using fewer resources



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