HCIN720
Designing User Experiences for Internet-Connected Devices

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Failure

- Failure is how we learn!
- This is my first time teaching this course. My lectures, projects, etc might fail.
- We'll all fail & learn collaboratively!
- Key: try!

Today

- Assignment 1: due Thursday, September 4, at 1:59 PM
- Hands-on: learning skills for assignment 1
  - Javascript
  - web APIs
  - node.js
  - data visualization

Assignment 1 goals

- Get an environment set up to experiment with web APIs
- Learn how to use git and Github
- Understand how to call web APIs and work with the data
- Understand how to visualize data with Javascript

Assignment 1 task

- Visualize a public datastream using Javascript graphics
- C-level work: line graph of data with updating
- B-level work: add a second, creative visualization
- A-level work: high-quality work with a data source you found yourself

Examples

Skills

- Javascript & JSON
- Web APIs (e.g. REST)
- Visualization

Javascript

http://repl.it

JSON

- Javascript Object Notation
- A compact, convenient, text-based, human-readable way to pass data around
- Often the result of web API calls
- Very specific format: don't try to hand-code
  - Use `JSON.stringify()` and `JSON.parse()` to convert back and forth between JSON strings and Javascript objects

```
var flight = {
  airline: "Oceanic",
  number: 815,
  departure: {
    IATA: "SYD",
    time: "2004-09-22 14:55",
    city: "Sydney"
  },
  arrival: {
    IATA: "LAX",
    time: "2004-09-23 10:42",
    city: "Los Angeles"
  }
};
```

https://data.sparkfun.com/streams/4Jr1NG5a80t7X06yqKmO

OutDoorTemp

Outdoor Humidity and Temperature

Manage

JSON | CSV | MySQL | PostgreSQL | Atom

humidity | temp | western_mass

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outdoorrh	outdoortemp	timestamp
50.80	93.38	2015-08-18T19:49:58.957Z
50.80	93.38	2015-08-18T19:48:56.096Z
50.60	93.38	2015-08-18T19:47:54.521Z
50.90	93.56	2015-08-18T19:46:52.905Z
51.0	93.56	2015-08-18T19:45:51.374Z