The Internet of Things
A Brief Review
The Internet of Things (IoT)

- Ad hoc networking
- Facilitate communication across a wide range of device types
- Make everyday tasks more efficient and convenient
- Simplify software maintenance
The Orchestra of Things (OOT)

Every object is a thing.

- smart phone
- tablet
- violin
- laptop
- Raspberry Pi
  (That’s “pi”, not pie...)
- A real Raspberry pie
  (if you so desire)
The Orchestra of Things (OOT)
Architecture

RESTful client-server setup built on HTML, CSS, Javascript, Python
Architecture

Built on the following frameworks:

- EvoThings
- HyperReload
- Django
Issues
Amnesia and Identity Crises
(UUID persistence)

Where did all of my things go?

Well, this is unfortunate...

Wait, who am I again?

“Audition for OOT,” they said...
“It will be easy,” they said!

OOT Server
Security

- Cross-site HTTP POSTing requires special message headers
- High level web languages easy to implement but cannot (easily) access low-level object details
- OOT not exempt from IoT security holes
Future Work
Future Work

- Develop persistent unique identifiers
- Resolve security issues
- Incorporate embedded devices like Raspberry Pi
- Deploy OOT to Laptop Orchestra of Louisiana for testing / use
Questions?
Sources

- EvoThings.com
- HyperReload.com
- DjangoProject.com
Thank you!