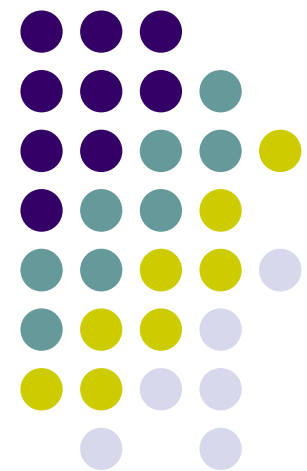


Ubiquitous and Mobile Computing

CS 403x: *EnergyUp*

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Introduction

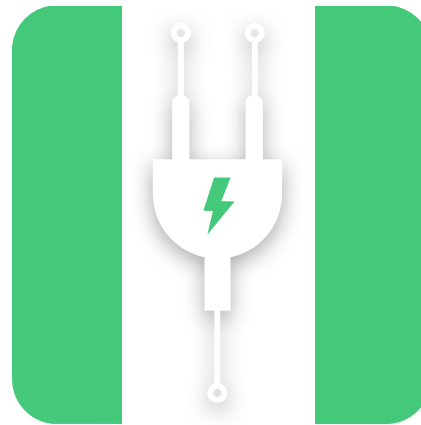
- Most cell phone run out of battery during the day
- **Soofas** in Boston, by an WPI alumni (solar-powered benches can charge your phone)
- **Powermat**





EnergyUp

- Charger and Power bank sharing platform
- Matching people with charger
- Streamline the process



A Charger Sharing Application



No more worries about your battery



- Geo-location charger finding
- Various charger type selection
- Automatic matching system based on location and availability
- Auto-update on map other's location
- QR code scan ensure security
- Evaluating and Energy system



Implementation

- Android Side:
 - Camara and QR code
 - Storage Access Framework
 - Goolgle Play Api
 - LocationManager
 - DownloadManager
 - GoogleAuthUtil

- Server Side:

LeanCloud



User Test & Feedback

+ Positive Feedback :

Friendly UI

Easy to use

- Negative Feedback:

Notification system

Cannot show the people around

Not enough people using it



Future work

- Better notification system
- Map path finding
- More detailed and secure user profile system
- Could be extended for sharing economy model



References

- Rudenko, Anna (16 August 2013). "The collaborative consumption on the rise: why shared economy is winning over the "capitalism of me"". Retrieved 10 July 2015.
- Parsons, Adam (5 March 2014). "The sharing economy: a short introduction to its political evolution". opendemocracy.net. Retrieved 10 July 2015.
- Bradshaw, Della (22 April 2015). "Sharing economy benefits lower income groups". FT.com. Retrieved 10 July 2015.