Busy Bear

Thomas Emerson | Tom Goon | Allison Todd

TA: David Tekien | Instructor: Jim Feher

Busy Bear's goal is to gather and share information that allows the WashU community to make more educated decisions regarding where to go and when to go there.

Objectives

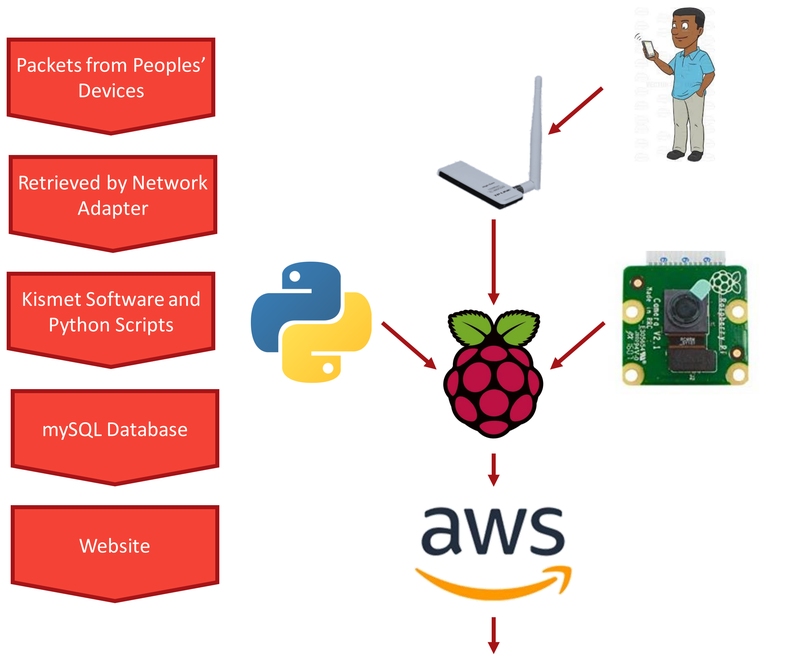
- Use a combination of network detection and images to measure relative busyness
- Utilize a database to store and analyze data to map historical trends
- Host an aesthetically pleasing and useful website for users to see relative busyness

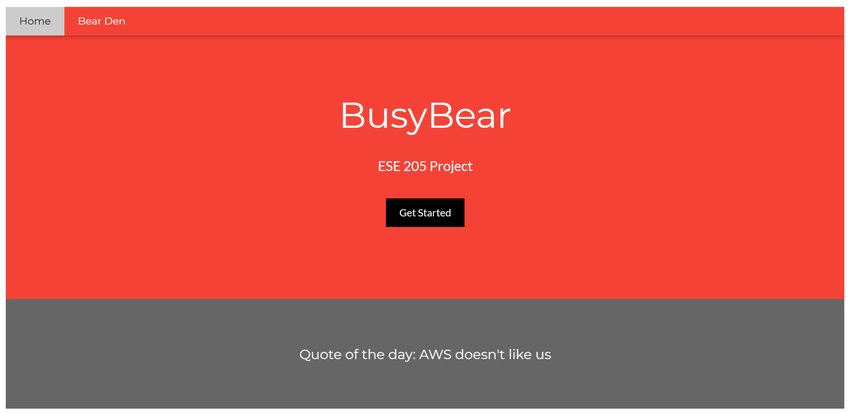
Challenges

- Capturing packets from devices in a local area
- Creating a relative measure of busyness based off of data
- Communicating information between the Pi, database, and website
- Navigating privacy and security concerns

Budget

Item	Cost
Alfa Network Adapter	$32.00
Domain Name	$12.00
AWS Website Hosting	$5/month (3 months)
Raspberry Pi 3B+	$35.00
Pi Camera	$30.00
Total	$134.00



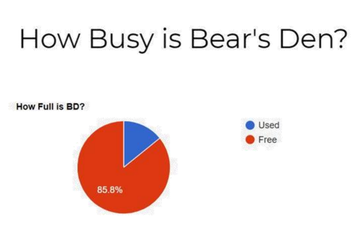


visit us at www.mybusybear.com

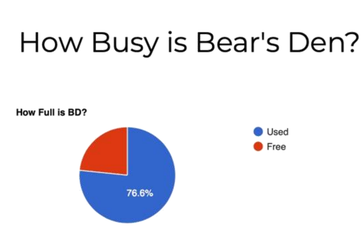
Solutions

- Combination of a network adapter in "monitoring mode", the Raspberry Pi, and kismet software to collect MAC Addresses
- AWS and mySQL to host a database to store and manipulate MAC Addresses & website to display information.
- PHP, Javascript, and CSS to construct the graphs and website seen.

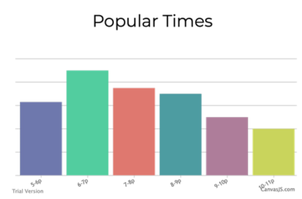
Live Database on 4/16 at 5:10



Live Database on 4/16 at 6:45



Historical Database on 4/16



Next Steps

- Have a Pi running in more locations 24/7
- Address security and ethical concerns
- Design methodology for image recognition for an additional layer of measurement

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