Max Carradine

Data Structures
Week 8 Assignment

Tilt Sensor

The tilt sensor will be used to track the amount of conscious time I spend at home with my spouse. The binary output will show a value of 1 when we are home together while conscious, and a 0 when we are apart or sleeping.

Temperature Sensor

The temperature sensor will be used to track the temperature reported in my living room.

Data Model

A single table will contain three columns:

- tiltsensensor (int)
- tempsensor (double precision)
- sensortime (date\time)

Data Frequency

Hourly calls will be made to the photon device, and data will be written to an AWS-hosted SQL database.

Data Aggregation

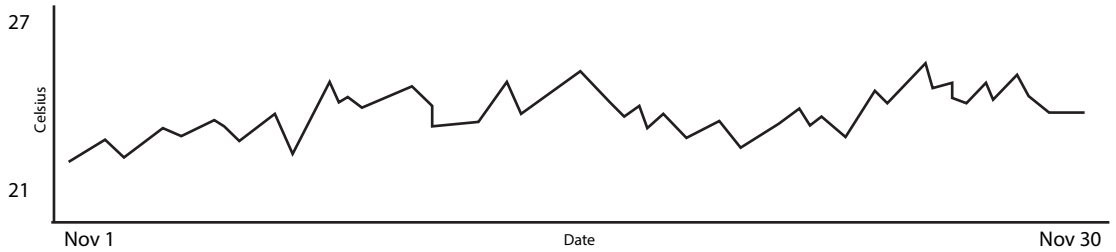
Temperature data will occupy its own visualization (independent of the tilt sensor data). Data will be aggregated in the reporting layer in order to show 6hr averages (resulting in four data points per day).

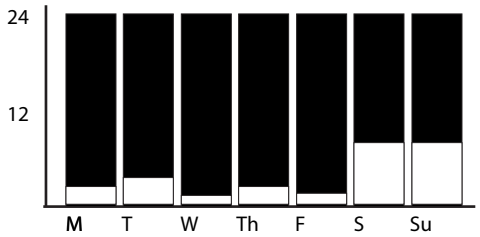
Tilt data will be summarized per day in order to show the average amount of time spent each day with my partner. It could then be analyzed by day (ie all Tuesdays) or weekday vs weekend.

Example Table

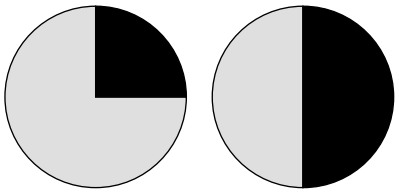
tiltsensor	tempsensor	sensortime
0	25.22	2017-10-20 00:36:29.129324
1	24.89	2017-10-20 00:37:42.857468
0	25.13	2017-10-20 00:50:54.129875
0	25.13	2017-10-20 00:58:22.1188

Daily Temperature Averages





Daily Conscious Time Together Averages



Weekdays vs Weekends