Agenda

HW9 live grading
Legible Graphs
HW10
Example of a heatmap (red – high, blue – low)
Annotations
Overlapping legend
Legend order different from line order
Figure 2: The average minimum coverage achieved by various algorithms over 100 real world data sets of 1M items each.

Figure 4: Experimental results for the Independent data set

Legend overlapping data
(c) Reliability with different blacklisting thresholds
We saw two common styles

Arrows and text

Legends
Tools

matplotlib
Gnuplot
Excel
Inkspace
Powerpoint

Learn about: Vector format, high resolution graphics
Screen captured images
Zoom in before capture
Start with a large image
Ideally start with a vector image
Font size
Fig. 4. Performances of various structures for a number of link-interference related problems.

Fig. 5. Minimize the maximum link interference with different spanning ratio requirements.

Unusual placement of legends
Font size of axis labels too small
Just one idea to improve all your graphs

Increase the font size
Range
These graphs do not use consistent y-axis range so hard to compare across graphs
Idea #1 Range of the metric
Idea #2 Range of the observed values
Caption

Should be mostly self-contained
Don’t just describe the lines
BigBen, a state change time between action rate and that rate of the rate suddenly if these rate change how does BigBen each activation approach time keeping. To a low-power Micro RTC powered by a reliable time source activation. Now calibrate time change events, advantage change global clock. This is events locally rather to the RTC, BigBen the lights turned on until logs rather than on rooms with time (~3 months). sensors feasible. Monitoring is worth configuring to transform a proxy for occupancy detection that many rooms sensitive lights. That are detected in a no motion is detected BigBen can detect highly infer when the motion, but in certain deploying an energy-

![Recharge Rate Chart](image1)

**Figure 6:** Recharge rate in varying lighting conditions. We measure the time the solar cell based energy-harvester takes to recharge in opportunistic trigger mode under different lighting conditions. As expected, the brighter the room the faster the recharge rate. Rooms with natural light (atrium and office) can support relatively fast recharge rates (in the 10s of seconds). Rooms with only artificial light (lab) cause the sensor to recharge more slowly, but can still support a sample every two minutes.

![CDF Chart](image2)

**Figure 7:** CDF of the interval between door open events. Plotted on a log scale x-axis is the CDF of time intervals between subsequent door opening events of a door over a 1 month period. Also shown are the recharge times for the solar based energy-harvesting power supply in different lighting conditions. Sensors in rooms with natural light would be able to detect most door open events, and even in moderately lit rooms at least 65% of door open events would be detected.
Graphs Case Study
(a) Alexa App Ratings Distribution

(b) Amazon Echo Dot Ratings Distribution

Fig. 1. Amazon Alexa App and Device Rating Distribution

(a) Google Home App Ratings Distribution

(b) Google WiFi System Ratings Distribution

Fig. 2. Google Home App and Device Rating Distribution

(a) Insteon for Hub App Ratings Distribution

(b) Insteon Hub Device Ratings Distribution

Fig. 3. Insteon App and Device Rating Distribution
Fig. 4. Kevo App and Device Rating Distribution

Fig. 5. Tile App and Device Rating Distribution
HW10

Describe the results from your research.