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**Data Mining Homework 1  
  
Task: Listen to the podcast / watch the video and write a 3-5 sentence reaction to the podcast. State in your own words what you learned, what expanding your knowledge of the topic and what you found interesting about the information you received.**

A fascinating and enlightening video that offers viewers hope for long-term improvements in data visualization.  My comprehension of data visualisation and the growth of open source has significantly enhanced.

Considering how pervasive data is, I realised how enormous data visualisation is and how crucial and effective it may be to gain insights. Everyone in today's generation has some sort of information to give, and since it is challenging to manually identify insights in every circumstance, data visualisation plays a critical role.

Open source's core concept is truly fantastic. I also received guidance regarding how to begin using data visualisation. I was advised to fork already-existing datasets to start, then use raw data as I developed more expertise.

**Task: Go to observablehq.com and find ONE project. With the one project please enumerate the following:**

**(a) please give the title, URL and description of the project on Observable,**

Title: CyclePlot w/ Energy Data

URL: [CyclePlot w/ Energy Data / Zan / Observable (observablehq.com)](https://observablehq.com/@zanarmstrong/hour-day-usage-data)

Description: Solar Cell is one of the most beneficial inventions to save energy and use it for electricity. During the summer season, most of the days are sunny, and hence solar cells can produce more energy than it is required or consumed. Some days are usually less sunny, some are during the winter season and we have the time of the night everyday, where the sun is not up the sky. At this time, we can pull energy from PG&E’s(Pacific Gas and Electric Company).

This project is a remake of the Dundas Chart Enterprise Edition using Observable Plot, which shows a weather related pattern from Sunny to Cloudy.

**(b) describe the datasets used in the project (you can just provide 1 sentence summary of the dataset),**

The dataset used here is the data of the usage of energy from PG&E. It is taken from a PG&E account, where the energy use can be viewed. The data can be downloaded once scrolled down in that specific page. It can be exported in CSV format, and used as a CSV file.

**(c) provide a brief description of the visualizations used (1 sentence),**

Observable Plot is a JavaScript library, created by Observable themselves. It has been used for exploratory data visualization in this project. Using Observable Plot, a box plot has been created to check the weather patterns. In this case, we cannot see all the data at once.

To see all the data of energy used from PG&E at once, they have used a cycleplot with points, which can show the 24 hours views in one big chart itself. They have also visualized the data of energy used by PG&E for a whole year, along with the focus of a specific month, which shows the hour by usage, with a dot for each day. Scatterplot has been used to show the usage of energy from PG&E for whole year, and a day of a week.

**(d) describe why you found this dataset/project interesting (no more than 2 sentences).**

The usage of electricity has been increasing a lot since the last decade, and it can be easily reduced by using solar cells, which comes from a renewable resource. By visualizing the amount of energy we have consumed from PG&E, we can limit and minimize our usage of this energy and make sure we only use as much as needed.