

COGS 108 - Final Project Proposal

Names

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Research Question

What is the relationship between average daily temperature and electricity consumption in a specific city over the course of summer?

Background and Prior Work

It is important for the city of San Diego and California to be aware of their energy consumption and use so the city is able to plan for large amounts of energy use. Understanding the relationship is important for energy planning, resource allocation, and being able to create plans for sustainable energy. So understanding the relationship between temperature and high energy use is important to help better San Diego in becoming more energy efficient.

Prior work: Zhang, C., Liao, H. & Mi, Z. Climate impacts: temperature and electricity consumption. *Nat Hazards* 99, 1259–1275 (2019).

<https://doi.org/10.1007/s11069-019-03653-w>

Hypothesis

We have hypothesized that the as average daily temperature in San Diego rises in the summer, it will lead to more electricity consumption

Our null hypothesis is that there isn't a strong enough relationship from the temperature to be affecting San Diego's electricity consumption.

Data

The variables we would need are Dates so that we can track the timeline of data collected. The average daily temperature for each day in the summer period. And the Electricity consumption that is consumed on each day of the time period we are going to use. This data collection would be a record of previous or current observations. So we just need to record our data and put it in our database. The data can be stored on spreadsheets so we can see the data as a whole.

<https://ecdms.energy.ca.gov/elecbycounty.aspx>

Ethics & Privacy

- We created our research question without preconceived biases or assumptions about the outcome
- We will gather our data from government and reliable sources to insure quality accurate data
- We will document our data collection process to allow for transparency so that others may run this project.
- We will respect privacy and data protection

Team Expectations

- Active Participation
- Clear Communication
- Collaboration and Respect
- Accountability
- Conflict Resolution
- Regular Progress Updates

Project Timeline Proposal

Meeting Date	Meeting Time	Completed Before Meeting	Discuss at Meeting
7/19	5pm	Gather information related to our project. Search for datasets	Assign group members to lead each specific part of the project

7/26	5pm	Do background research on topic	Discuss ideal dataset(s) and ethics; finalize project proposal
8/2	5pm	Review paper and edit	How to finalize the project and talk about what we need to finish