DATS 6101 Project Proposal – Group Project 1

Team Name: Data Science Rookies (Team No.4)

Team Members

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Description and SMART Questions

In the 21st century, climate change has become recognized as a severe global issue. Climate change is a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates. These changes have a broad range of observed effects that are synonymous with the term (1). Human activities causing an increase in greenhouse gas emissions, fossil fuel burning in particular, are the driving cause of climate change and global warming. The average increase in global temperature between 1880 and 1981 was ~0.07°C (0.13°F); however, the average rate of increase since 1981 (0.18°C / 0.32°F) has more than doubled (2). One method for combatting climate change is to increase the supply and use of renewable energy, particularly solar energy, which allows for the replacing of carbon-intensive energy sources and an overall significant reduction in greenhouse gas emissions. This project aims to focus on the availability of solar panel implementations by city region and the potential carbon-offsets that coincide with increased solar energy use. The following questions are the main subjects which this project focuses on:

1. Analyze the effects of estimated annual sunlight and number of potential panels per different directional facing buildings on the total solar energy generation potential per city in Los Angelas and Washington DC in 2017.
2. Determine the estimated potential carbon offset from solar energy use per city in Los Angelas and Washington DC in 2017.
3. Use longitude and latitude to determine the efficiency of producing solar energy per city.

Data Source

https://www.kaggle.com/jboysen/google-project-sunroof?select=metadata.csv

Git Repository

https://github.com/breardon7/6101-GroupProject

Citations

1. Climate.nasa.gov
2. Climate.gov