Capstone three – Project proposal

Problem statement formation (Hypothesis):

Can we predict the electricity load for three cities of Panama, considering meteorologic conditions, holidays, and school schedule?

Context:

Electricity needs in each country is evolving, with an increased pressure coming from multiple components, some being demographic growth, industrialisation, and transition towards electric resources. It is becoming increasingly important to ensure the integrity of the electricity distribution system to avoid any overload or disturbance. Electricity load prediction is a promising avenue to deal with this problem.

Criteria for success:

The success constraint of this project is to construct a coherent short-term time-series model validated in different sections of the dataset. This dataset has also been the subject of a Kaggle competition, and our results could be compared to some published notebooks to determine our degree of success.

Scope of solution:

The analysis is restricted to three Panamean cities (Tocumen, Santiago city, and David city), between 2015 and 2020.

Constraints within solution space:

The dataset is already very clean. Challenges probably will come in the modelling phase, with the application of deep learning.

Stakeholder(s) to provide key insight:

M. Ricardo D. Alanis-Tamez, mentor for the Springboard Data Science Career Track, is the stakeholder for the project.

Data sources are required:

The dataset is accessible on Kaggle[1].

Deliverables:

Data manipulations will be available in the form of jupyter notebooks, and the results of the project will be submitted in a report and a slide presentation.

[1] https://www.kaggle.com/datasets/saurabhshahane/electricity-load-forecasting