

Data Society Group - Pre-interview Exercise

Please create a small analysis and model based on this dataset

https://www.energy.ca.gov/sites/default/files/2024-04/EnergyStorage_April2024.xlsx.

Specific requirements:

- Coding exercise (choose either Python script or notebook):
 - Explore and summarize:
 - Perform a quick summary / EDA of the data at hand
 - Model:
 - State a problem/question to be solved or answered, here's an example:
 - Can we use Solar and other types of renewable energy capacity to predict Battery capacity?
 - Create a predictive model on the dataset that solves that problem.
 - You may use other datasets to augment your model. If you choose to do so, please make sure to state what made you choose that data/variable in your model.
 - Present:
 - Interpret the results
 - Given the above, present your findings in a concise format to business stakeholders (you can use a short summary document or a few presentation slides)
- Notes:
 - Be prepared to create a set of queries that address the following requests from a potential user/stakeholder:
 - Get results of analyses or EDA for **arbitrary time ranges / categories** - based on the user's specified time range, the answer should include the entire dataset or a single point, and anything in between
 - Clearly state why you picked certain predictor(s)
 - Clearly state what and why you are trying to predict (i.e. your outcome variable)
 - Make sure to add any special assumptions you had to make
 - Make sure to show how you validated your assumptions
 - **Be prepared to talk about your decision-making** at a high level, for tech stack, model selection, and implementation.
 - Along with the source code, include a README.md file in Markdown format which documents your solution and how to use it. Deliver the application via shared git repository (e.g. GitHub, BitBucket).
 - Feel free to ask clarifying questions if necessary.

Submission:

We understand that everyone has busy schedules. If possible, please deliver the application within 3 business days of receiving the prompt (if more time is needed, contact Tawana Johnson at tawana.johnson@datasociety.com).

Upon completion, send an email with a link to the git repository (e.g. GitHub, BitBucket) to Tawana Johnson (tawana.johnson@datasociety.com).