Columbia FinTech Bootcamp - Project 1 Proposal

Submission of this for is acknowledgement and understanding of this rubric, it's content, and what you are responsible for as an individual or group. Please note that when grading I am not only grading your work but also YOU - your demonstration of knowledge, presentation skills, contribution of working and meaningful code through commits, etc.

Technical Requirements

The technical requirements for Project 1 are as follows:
Software Version Control (10 points)

- Repository created on GitHub. (2 points)
- Files frequently committed to repository. (3 points)
- Commit messages with appropriate level of detail included. (2 points)
- Repository organized, and relevant information and project files included. (3 points)

Data Collection and Preparation (10 points)

- Data collected from CSV files, APIs, or databases by using Python or a Python library. (5 points)
- Data cleaned and prepared for the application or analysis by using Python or a Python library. (5 points)

Financial Programming (40 points)

- Code runs without errors and produces the assigned results. (25 points)
- Code uses good systems design with appropriate use of functions and modules for code organization. (5 points)
- Code uses DRY (don't repeat yourself) principles and is as concise as possible. Variable names are short but specific. (5 points)
- Code incorporates a new Python library not previously covered in the course. (5 points)

Documentation (15 points)

- Code is well commented with concise, relevant notes. (5 points)
- GitHub README file includes a concise project overview. (2 points)
- GitHub README file includes detailed usage and installation instructions. (3 points)
- GitHub README includes either examples of the application or results and summary of the analysis. (5 points)

Presentation Requirements (25 points)

- An executive summary/overview of the project and project goals. (5 points)
- Data Collection, Cleanup & Exploration (5 points)
- The approach that your group took in achieving the project goals. (5 points)

- The results/conclusions of the financial application or analysis. (5 points)
- Next Steps. (5 points)

Instructor discretion of adding or subtracting points (within reason) based on the following, but not limited to:

- Presentation skills - everyone presents the same amount of minutes, slide organization, concise and well rehearsed presentation, etc.
- Overall demonstration of knowledge and
- Mastery of content, or thereof

Note - I usually do not take off points unless there is glaring, unavoidable issues with your project that I have to take into consideration.

✓

nksdhn@gmail.com Ander account

☁ Concept opgeslagen

*Vereist

E-mailadres *

↩

nksdhn@gmail.com

⚠

Enter Group Number or Name *

Group6

Enter Project Title *

Energy Cost Predictor

Team Member #1 - First and Last Name *

Marc Pocorni

Team Member #2 - First and Last Name (NA if none) *

Vincent Sgarzi

Team Member #3 - First and Last Name (NA if none) *

Andre Johnson

Team Member #4 - First and Last Name (NA if none) *

Niels de Haan

Team Member #5 - First and Last Name (NA if none) *

NA

Enter project description *
What will be the project about?

Energy Cost Predictor

Enter project objective *
Based on the previous question, Why do you choose this type of project?

We choose this type of project to explore future Energy Costs for households, to provide
more insight into future cost of energy on an per household basis.

Enter research questions to answer. *

How would you structure your initial questions to start finding answers to your project objective?

What effect does temperature have on a household's energy consumption, what effect do energy prices (WTI Nymex and Natural Gas) have on a households energy cost and how can we predict future household energy costs?

Enter links or describe datasets to be used. *

Weather website:
Weather_data - https://www.aerisweather.com/support/docs/api/
Natural_Gas_data - https://www.nasdaq.com/market-activity/commodities/ng%3Anmx/historical
WTI_Nymex_data - https://www.nasdaq.com/market-activity/commodities/cl:nmx/historical
Energy_Household_user_data: https://myaccount.psegliny.com/user/login
Average_KWH_data_NJ/PA/NY: https://alfred.stlouisfed.org/series/downloaddata?seid=APUS12A72610

Enter rough breakdown of tasks assignments for each team member. This might   *
change over time but I need to know what everyone plans on doing to grade
properly.

* Create Github repository, provide access to members of group, commit frequently and
provide quality commit messages.
* Provide clear documentation including README file with clear overview of project,
installation instructions and summary of analysis
* Download Household Energy User Data (CSV Download)
* Import weather data (Weather API)
* Import Energy Data (CL and NG API)
* Download Household average KWH cost data
* Explore relationship between energy usage and weather
* Explore correlation between average KWH cost in NJ/PA/NY and WTI Nymex
* Explore correlation between average KWH cost in NJ/PA/NY and NG Nymex
* Predict future KWH price based on highest correlated KWH cost driver (MC Simulation)
* Predict future energy cost per month/year for household
* Create interactive plots
* Draw Conclusions
* Present conclusions

Een kopie van je antwoorden wordt gemaild naar het adres dat je hebt opgegeven.

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