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Technical Portfolio Summary:

Clean Energy Society Project-

Multiple regression time series analysis for energy resources in Spain-

https://colab.research.google.com/drive/1GCuX-1zwgKGwQfgQ7gh6X18Tjk0iN0b-?usp=sharing

Sampled a dataset of the Spanish wholesale energy market from Kaggle.com to code a multiple regression time series analysis to analyze how the prices of energy in Euro affected the outputs of certain resources utilized for energy production in megawatt hours. Certain techniques such as data splitting, data merging, ADF seasonality tests, partial and autocorrelation plots, residual plots, scatterplots, OLS summary tables, histograms, bell curves, pie charts, stem plots, line graphs, seasonality plots, outlier extraction, box and whisker plots, IQR distribution tables, seasonality tables, and statistical tables for quadratic, logarithmic, linear, multilinear, and multi polynomial prediction models conducted were utilized in this project. This analysis statistically proved that energy outputs from wind production significantly increased when the price of energy per EUR/MWH increased. Since wind outputs are renewable, the EU government can provide carbon credits to companies utilizing wind energy from revenue in energy price increases. In addition, a market equilibrium was established between the elasticity of energy prices to resepective energy outputs as a result of this analysis. Formulated a multi polynomial regression that yielded an R squared value of 1.0. This project was coded in Python.

Additional Projects-

Seasonal regression analysis on the CPI index in Canada by monthly intervals-

https://docs.google.com/document/d/1iezjcQ7WfsdDRtlVS2pVW3mc_WcUyp38wqoYwt_iTmU/edit?usp=sharing

This regression analysis evaluated how seasonal trends affect the CPI index in the country of Canada. Certain techniques such as partial and autocorrelation plots, residual plots, line graphs, OLS summary tables, AIC description tables, BIC description tables, and the Friedman seasonality test for quadratic, exponential, linear, seasonal quadratic, seasonal exponential, and seasonal linear prediction models conducted were utilized in this project. This analysis statistically proved that the CPI values were not significantly dependent on seasonality under the Friedman Seasonality Test.This project was coded in R.

Multinomial logistic and multilinear regression for cereal brand rankings by quality-

https://docs.google.com/document/d/1ataCggBaNVYcXslzDAyAgS__Li_VrTR6D08XL3bgMSQ/edit?usp=sharing

This regression analysis evaluated the categorization of cereal brands by high or low quality nutritional content.Certain techniques such as data splitting,data merging, logistic summary tables, frequency tables, multilinear summary tables, outlier extraction, residual vs leverage plots, histograms, Q-Q plots, fitted vs residual plots and IQR distribution tables for logistical and linear prediction models conducted were utilized in this project. This project was coded in SAS and SQL.This analysis statistically proved how the values of each analyzed variable influenced the segmentation of cereal ratings.The formulated multilinear regression yielded a perfect R squared value of 1.0.

Total Sales and Billing of Wellington Global Marketplace products per State-

https://tinyurl.com/3vvmw9w9

Scripted, analyzed, and presented the total sales and billing of products sold by Wellington Global Marketplace. Merged and calculated data from a Wellington Global Marketplace inventory spreadsheet with discount and tax rates factored in using SQL.Created bar graphs and heat maps of each US state's data with Tableau.