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Technical Portfolio Summary:

Clean Energy Society Project-

Multiple regression time series analysis for energy resources in Spain-

This 800 page regression analysis evaluated how the prices of energy per EUR/MWH affected the outputs of certain resources utilized for energy production in the country of Spain from January 2015 to December 2018. 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. This meant that energy price increases resulted in higher renewable energy outputs. 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-

This regression analysis evaluated how seasonal trends affect the CPI index in the country of Canada from January 2000 to December 2009. 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-

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.

Remodeling sidewalks and hiking trails within and around Riverside Park in Hartford, Connecticut-

Modeled proposed sidewalks and ramps around the entrance of Riverside Park as well as at the hiking trails of Riverside Park through ArcGIS. The proposed sidewalks and ramps were designed to be handicap accessible.