ChatGPT Report

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10/01/2024

We used ChatGPT to delve into various aspects of data analysis and machine learning, addressing questions related to Jupyter Notebooks, pandas, data manipulation, exploratory data analysis (EDA), and hyperparameter tuning for machine learning models.

Data Analysis and Pandas:

We began by addressing queries related to NaN values in a DataFrame and exploring basic statistics like the number of observations for each year in a variable. Pandas functions such as isna(), isnull() and info() were employed for these tasks.

DataFrame Manipulation:

We then moved on to creating and manipulating DataFrames, extracting a subset of observations, and understanding the types of variables present in a DataFrame. Functions like head(), dtypes, and value_counts() were utilized.

Exploratory Data Analysis (EDA):

For EDA, we discussed visualizations, including plotting time series data using Matplotlib. A line plot for energy production over time was created, providing insights into the overall trend.

Here ChatGPT suggested doing cluster analysis, however it gave and error because we had missing values on our dataframe.

Machine Learning Model Tuning:

Here, we used ChatGPT to find a function that extracted the best parameters after doing hyperparameter tuning. ChatGPT suggested best_params_. We also used ChatGPT to see the difference between best_params_ and best_estimaror_.

Predictions data exportation:

We used ChatGPT to obtain help when exporting the predictions from our best model as a text file. We opened a text file and wrote on each prediction with a loop, but we encountered a problem because some '' where missing, which ChatGPT helped us catch.