



AS Time Series and Forecast GPT v 1.1 – Documentation and Instructions

Overview

The AS Time Series and Forecast GPT is a specialised tool designed for processing, analysing, and forecasting economic and financial time series data. It is aimed at finance and management professionals who understand statistical analysis and time series modelling, as well as to a specialised academic audience.

Capabilities

- 1. Data Processing:** Handles time series data primarily from Excel and CSV files, ensuring efficient and accurate analysis.
- 2. Basic Statistical Analysis:** Examines basic statistical properties of time series data, such as trends, seasonality, and cyclicalities.
- 3. Stationarity Checking:** Tests for stationarity in time series data, a critical step in ensuring the validity of many statistical models.
- 4. Multiple Linear Regression:** Runs multiple linear regressions, allowing for the understanding of relationships between variables. The GPT also has the capability to check for the robustness of residuals, and should be able to correct for issues in residuals.
- 5. Lagged Variable Creation:** Develops lagged variables essential for time series analysis, particularly in identifying lead-lag relationships.
- 6. Forecast Modelling:** Specializes in linear time series regressions to create accurate and reliable forecast models based on the uploaded data. The GPT can estimate and interpret ARIMA models.
- 7. Kalman filtering:** The GPT can run and estimate Kalman filters on time series data.
- 8. Visualization:** Displays outputs in informative charts and equations for easier interpretation and analysis.

How to Use

Data Upload

Format: Ensure your data is in an Excel or CSV format.

Upload: Use the file upload feature to provide the data set.

Data Order Clarification

Upon data upload, you will be asked to clarify the order of dates in your dataset (ascending or descending). This step is crucial for accurate data handling. The GPT will generally get this correct, but it can get confused, especially with series that is trending. It is generally best to specify from the start the frequency of your data, and whether the date column is ascending or descending.

Instruction Provision

Provide clear instructions on the analysis or forecasting task you need assistance with. For example, specify if you need a regression analysis, stationarity test, or a specific forecast model. Split your request into steps for better results.

Parameters Specification: If you have specific parameters or variables of interest, mention them explicitly in your prompt to the GPT. This helps the tool to speed up the analysis.

Analysis and Forecasting

The GPT will process the data according to your instructions, performing the requested analysis or developing the forecast model.

Results Interpretation

Results will be presented in the form of charts, tables, or equations. For complex analyses, a brief explanation will accompany the results for better understanding.

Follow-Up Questions

If you have any follow-up questions or need further clarification on the results, feel free to ask. The GPT is designed to provide detailed and technical explanations.

Notes

- Ensure your data is clean and well-organized before uploading. The GPT can sort out missing variables and mismatched columns, but the better formatted the data are from the start, the better the analysis.
- Be as specific as possible in your instructions to get the most accurate results.
- Basic knowledge of time series analysis is beneficial for effective use of this tool.
- The GPT has been trained mainly on macroeconomic and financial market data sets. This might affect its performance on non-economic data sets.

Version Updates

The GPT will be trained on an ad-hoc basis in line with user comments as well as the developer's aims and objectives.

General disclaimer

Please be aware that The AS Time Series and Forecast GPT is powered by GPT (Generative Pre-trained Transformer). This technology is designed to assist in the analysis and visualization of economic and financial data. While we strive for accuracy, the results generated by this tool should be used as a guide only and not as a definitive source. The tool's output is dependent on a variety of factors, including the quality of the input data and the inherent limitations of AI technology, which can lead to inaccuracies or incomplete analysis.

As the creator of The AS Time Series and Forecast GPT, Claus Vistesén does not assume responsibility for any decisions, investments, or actions taken based on the information provided by this tool. Users are strongly advised to perform their own due diligence and consult with professional advisors before making any financial or business decisions. The tool is not a substitute for professional advice and should not be relied upon as such.

By using The AS Time Series and Forecast GPT users acknowledge and agree that they are solely responsible for the interpretation and use of any and all information generated by the tool.