Build an Automated Time Series Forecasting Model

Welcome to the ultimate challenge of our advanced time series forecasting content! Here's where you'll apply all your knowledge and skills to build a fully automated time series forecasting model. Ready to take on the challenge and prove your forecasting prowess? Let's go!

Objective:

Create an automated time series forecasting model that can accurately predict future values of a given dataset.

You are free to choose any model or combination of models covered in the course. Your goal is to handle the entire forecasting pipeline autonomously and produce reliable, actionable forecasts.

Criteria for Success:

Success Criteria:

- **Preprocessing:** Your model must clean and preprocess the data efficiently, handling missing values and scaling appropriately.
- **Cross-Validation:** Employ thorough cross-validation techniques to validate the model's performance and ensure it generalizes well to unseen data.
- **Pipeline Automation:** Develop a fully automated pipeline that can preprocess data, train the model, tune parameters, and produce forecasts without manual intervention.
- **Reusability:** Ensure that your pipeline can be easily adapted to new datasets with minimal adjustments.
- **Visualization:** Provide clear and informative visualizations comparing forecasted values to actual data.