

Our aim was to find a solution to the challenge of forecasting daily order quantities. Our dataset includes daily order counts from May 2, 2020, to June 30, 2022. Additionally, we collected temperature and marketing expenditure data.

Our task was to run the model every Monday morning and obtain predictions for the upcoming period. We specify the number of days we want to forecast, and our model provides order predictions for those days. It's important to note that the temperature column values represent real data and are only available for current and past days. On the other hand, marketing expenditure, being a feature that can be known in advance, is accessible at prediction time. Furthermore, we're not only interested in point predictions but also in the uncertainty of those predictions. Before deploying this model, we need to evaluate its performance, hence we kindly request information about the out-of-sample performance.

Considering that our future colleagues will evaluate this task, we have taken care to structure our work meticulously. Our code is clean, well-commented, and easy to follow, with explanatory comments where necessary. Our report has been prepared to reflect our thought process in detail, explaining our reasoning comprehensively.

In the final stages, we've exposed the model through an API endpoint. This endpoint can return forecasts for a specified date range or provide forecasts for a desired prediction horizon. We trigger the 'predictions' function by providing the desired number of forecasted days. This function utilizes our model to predict order quantities starting from the given date.

This project not only showcases our technical skills but also demonstrates our ability to provide a consistent and well-explained solution, ready for evaluation by our future colleagues.

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