



EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS 2024 ESTORIL - PORTUGAL





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Implementing Nowcasting Techniques for Timelier Publications

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Introduction

- Aim of the project
- Target indexes
 - Producers Price Index
 - Producers Volume Index
 - Service Producers Price Index
- Nowcasting competition
- Use Supervised learning
 - Currently tree regressions
 - Plans for RNNs and LSTM



Data sources

- Usual suspects for price indexes are
 - Energy prices: gasoline, oil, natural gas, etc.
 - Online observable prices
 - Scanner data
- General data source:
 - World Bank Commodity Prices (The Pink Sheet)
- Hungary specific data for PVI:
 - Volume index of industry contracts
 - Hungarian Truck Toll Mileage

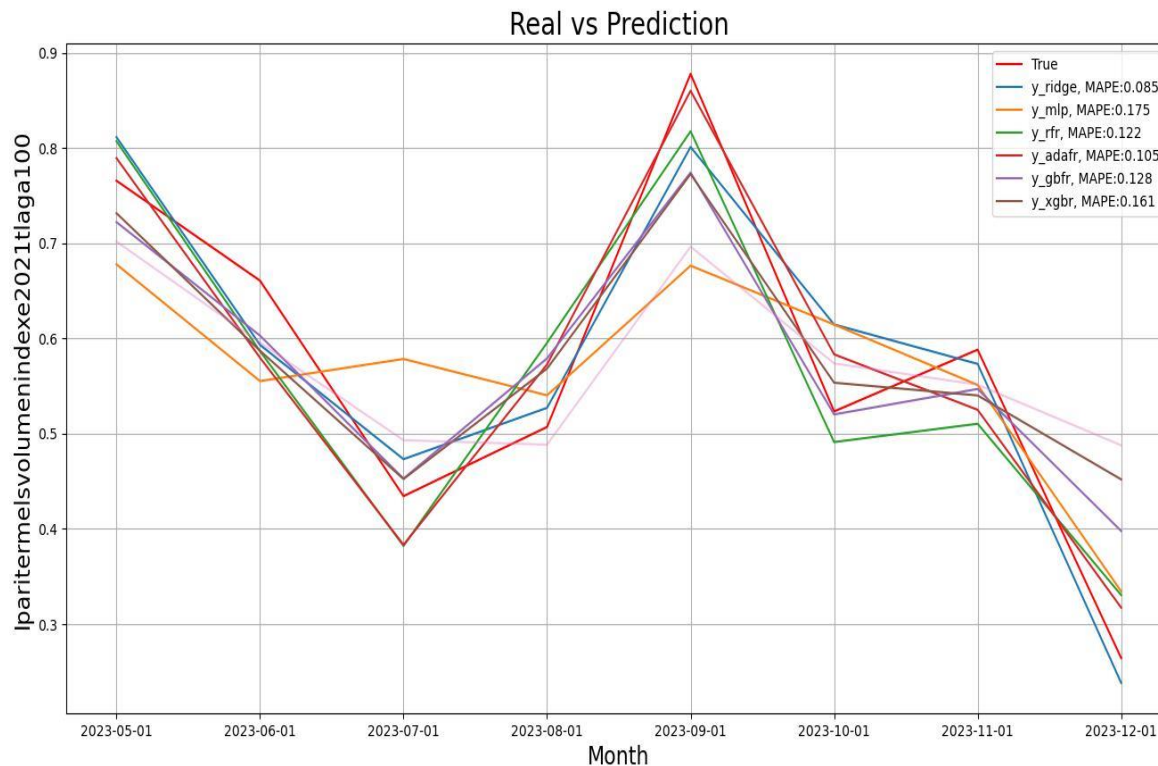


Nowcasting algorithm

1. Standard transformation
 - Lagging, Differencing, Logging
 - Scaling
2. Feature selection
 - Correlation, random forest, ridge and lasso
3. Hyperparameter tuning
 - Cross validations on split time series and one step ahead forecasts
 - Minimize on RMSE
4. Forecasting and evaluation



Current result for PVI



- Fairly close for a prototype
- A good benchmark for further development
- Room for improvement
- Importance of appropriate data



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Thank you for your attention!



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