Time Series Forecasting

Henrika Langen

Central European University
Department of Economics and Business

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Organizational matters

- Hyndman, Rob J., and George Athanasopoulos. Forecasting: principles and practice.
- Nielsen, Aileen. Practical time series analysis: Prediction with statistics and machine learning.

Office Hours

- Flexible office hours via Zoom (please connect with me at LangenH@ceu.edu)
- In-person office hours on lecture days (21/3 and 28/3)

- Closed-book exam on **April 2nd** (60%).
    - Mix of multiple-choice & open questions
    - Questions designed to assess comprehension of methods (no memorization questions).
- Assignment due by **April 20th** (40%)
    - Analysis of a real-life time series.
    - 2-3-page report along with code.

Assignment

- Select a real-life time series (possible sources: kaggle.com, UCI Machine Learning Repository,...).

- Apply two of the forecasting methods covered in this course and compare them.

- Describe the analysis on 2-3 pages (incl. graphs). The report should include the following:
  - Brief overview of the time series
  - Discussion of pre-processing and any encountered issues (if applicable)
  - Explanation of method selection, i.e, why did you choose these two methods?
  - Evaluation of goodness-of-fit and forecasting accuracy and comparison of the two approaches.
  - Prediction of future values of the time series

- Submit annotated code in the coding language of your choice together with the report.