

# Comparing Auto-ARIMA to NNAR

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2025-09-10

## R Markdown

Introduction The goal of this assignment was to build a model to forecast the unemployment rate for an assigned U.S. state, in this case, Maryland. The training window ranged from 1980 to December 2012, with the goal of producing a recursive forecast from 2013 onward. There are several important considerations in constructing an accurate forecasting model. This paper focuses on comparing three traditional time series models using recursive forecasting, followed by an attempt to use a Neural Network Autoregression (NNAR) model with an adaptive training window to see whether it can outperform the classic models. The goal was to determine whether the NNAR model can better account for structural features of the time series, such as cyclicity and time-varying seasonality.

## Including Plots

Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.