Unemployment assignment

Statement

Description

The **UnemploymentSpain.dat** dataset contains the unemployment figures for Spain for every month between January 2001 and October 2022. The total unemployment is given.

Tasks

a) Identify the best Seasonal ARIMA model to forecast the total unemployment rate.
b) Identify the best SARIMAX model to forecast the total unemployment rate accounting for the COVID-19 period using an intervention variable.
c) Compare both models.
d) Apply nonlinear techniques for forecasting the unemployment
e) Obtain the best forecast for the unemployment rate of **November 2022**

Write a report describing the process followed for each task.

- Sarima
- Sarimax (impulse variable: Crisis 2008, covid-19)
- Compare: AIC, significación, residuos (normalidad, test independencia, ruido blanco, outliers), predicciones
-No lineal: RNN, prophet
- Escoger mejor resultado de los 3 anteriores