Prediction of worldwide solar energy resources based on the NASA's meteorological data using AI and deep learning modeling techniques

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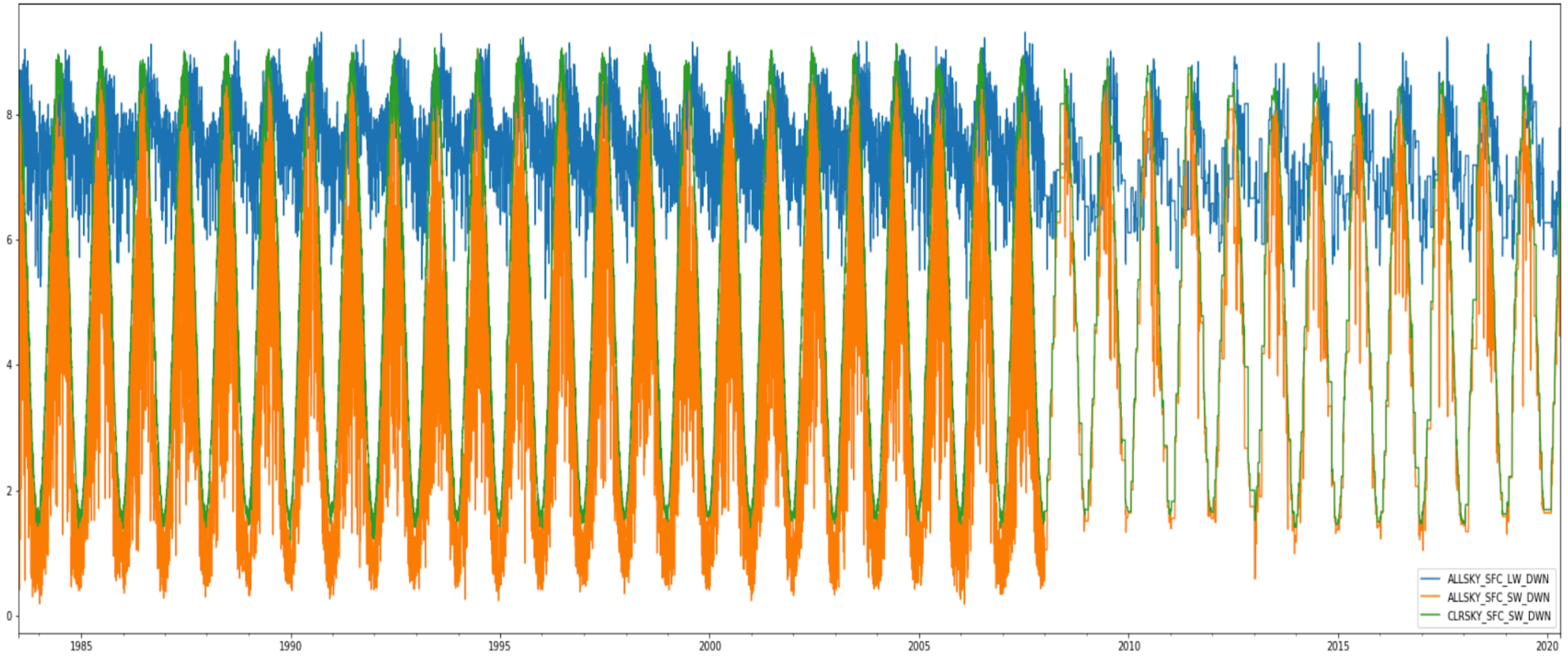
I. Business Context

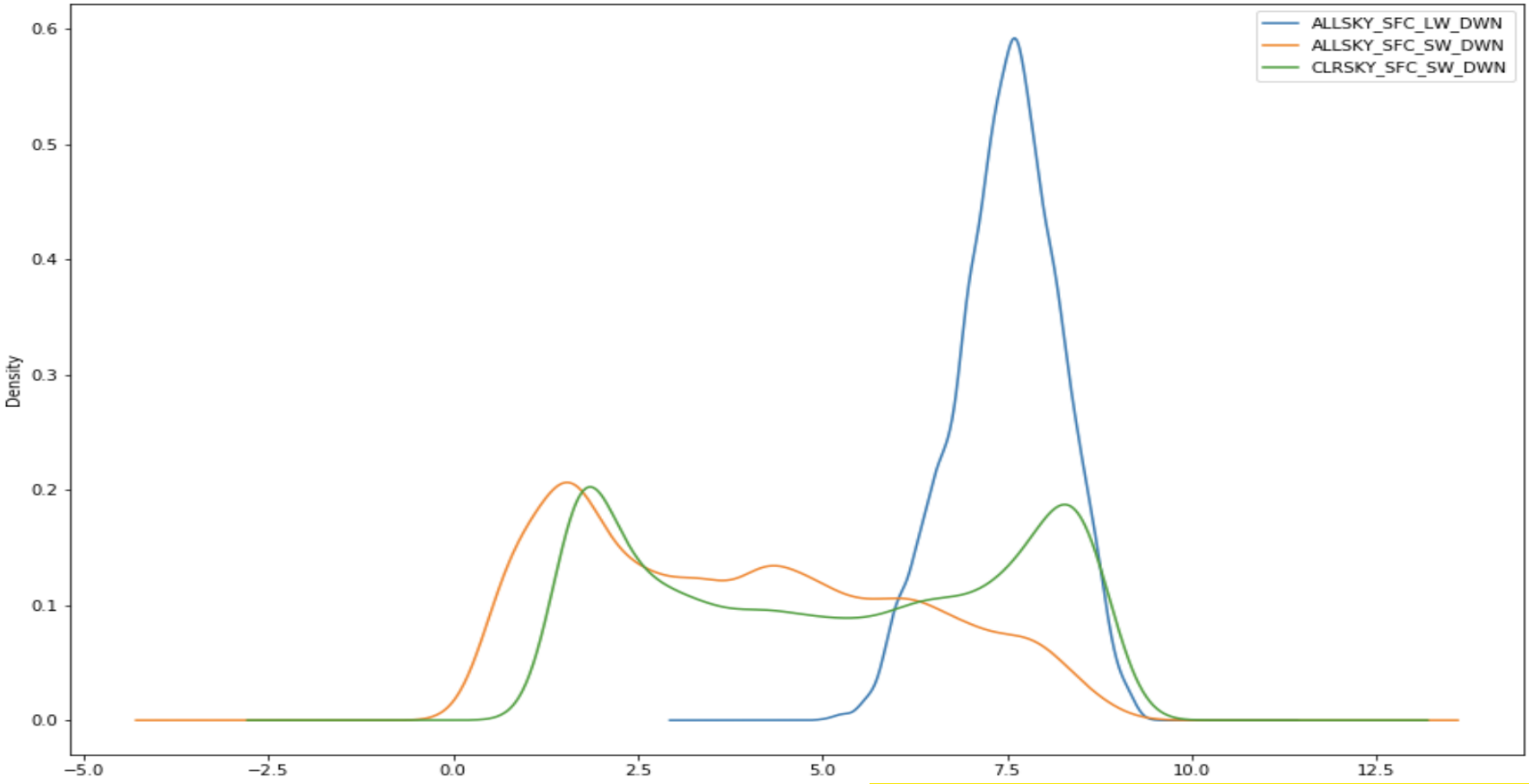
II. Problematic

Figure 3: In this example, “Actual Generation” is based on the peak solar production of a 100 MW transmission-tied, single-axis tracker PV plant, as shown in Figure 2. “Curtailed Generation” is based on a forecast that inaccurately predicted lower-than actual plant production.

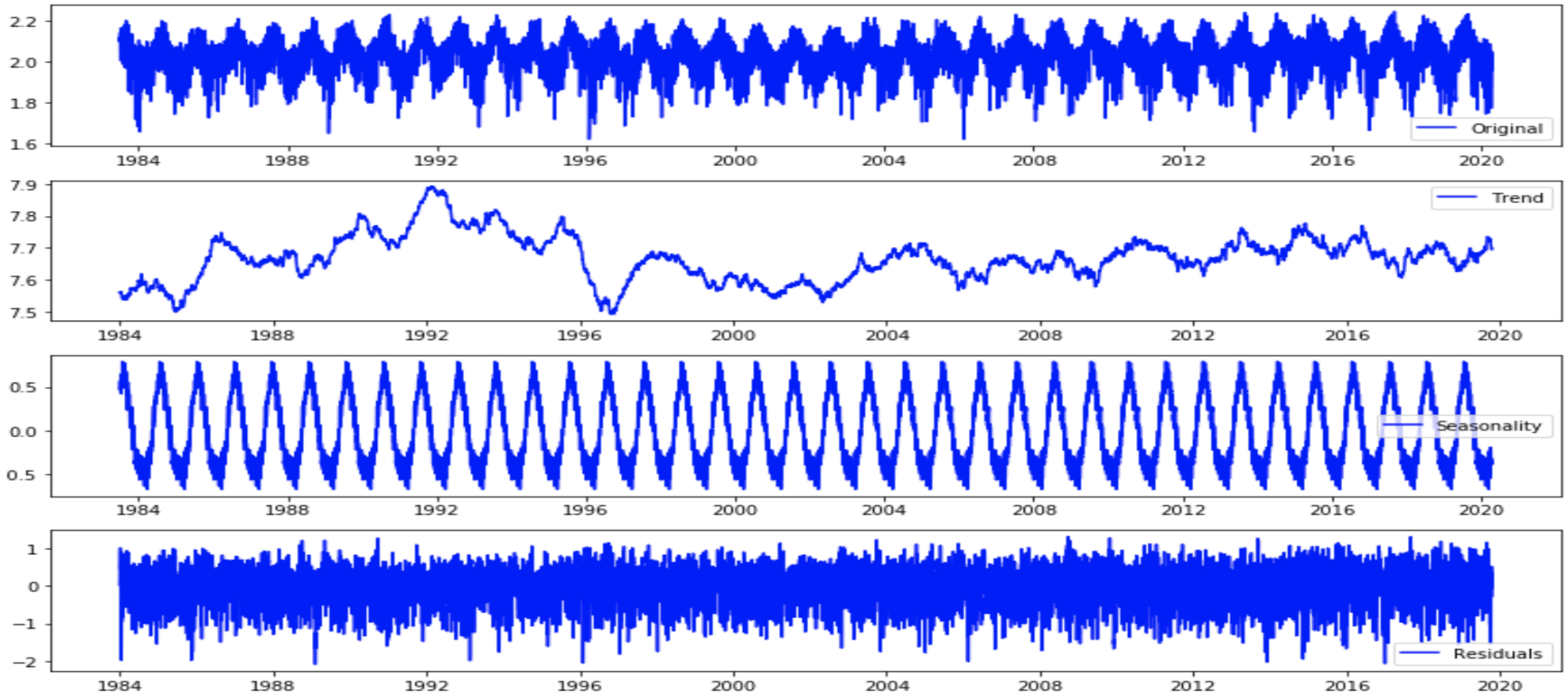
III. Data visualisation



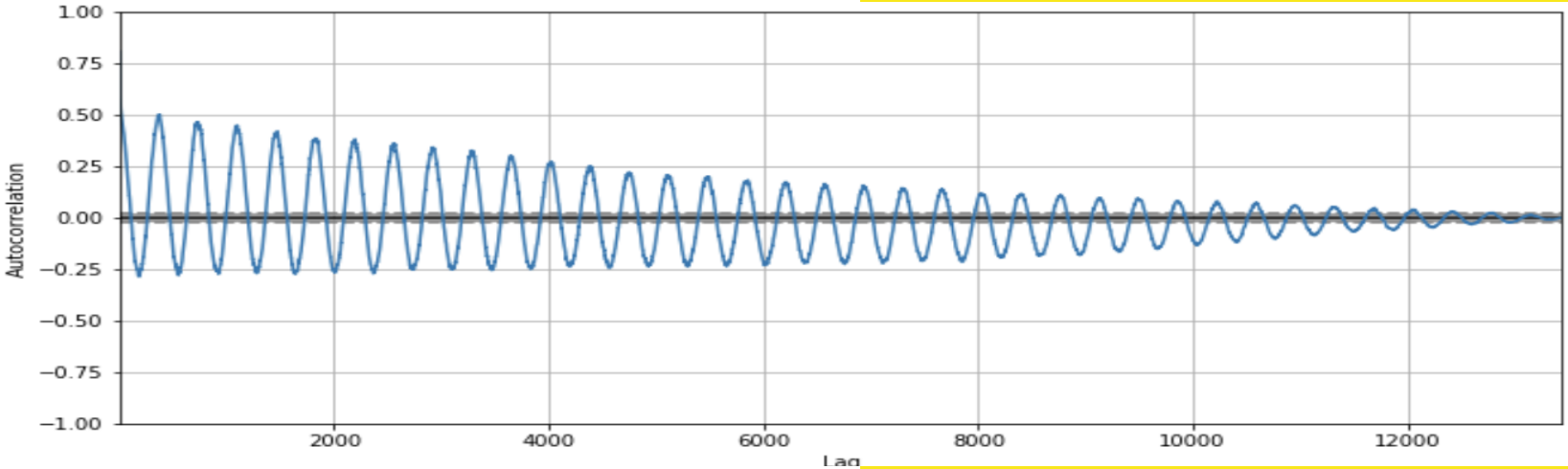
IV. Data distribution

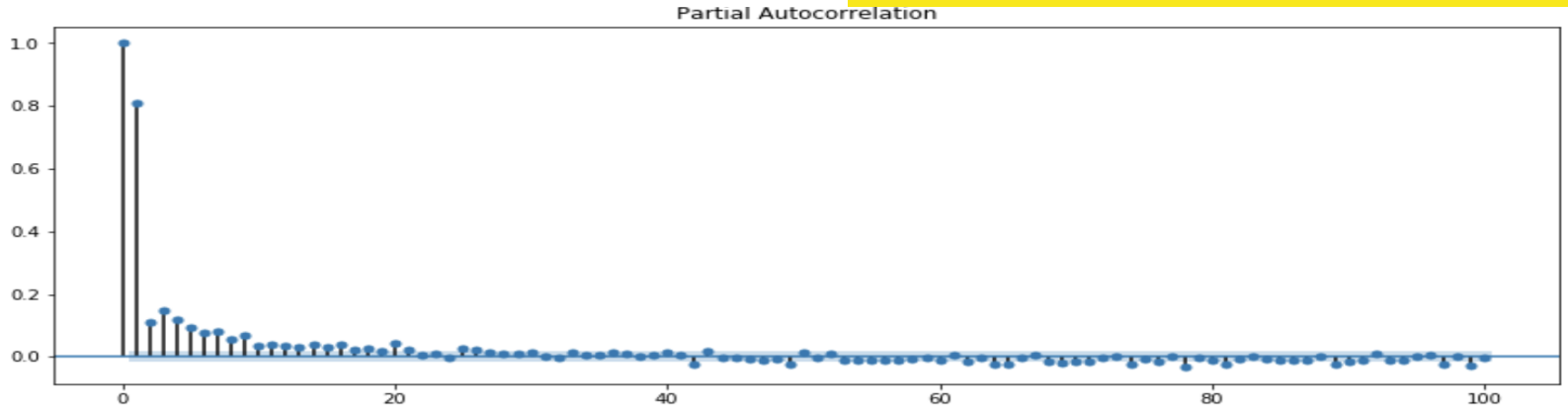


V. Times series decomposition

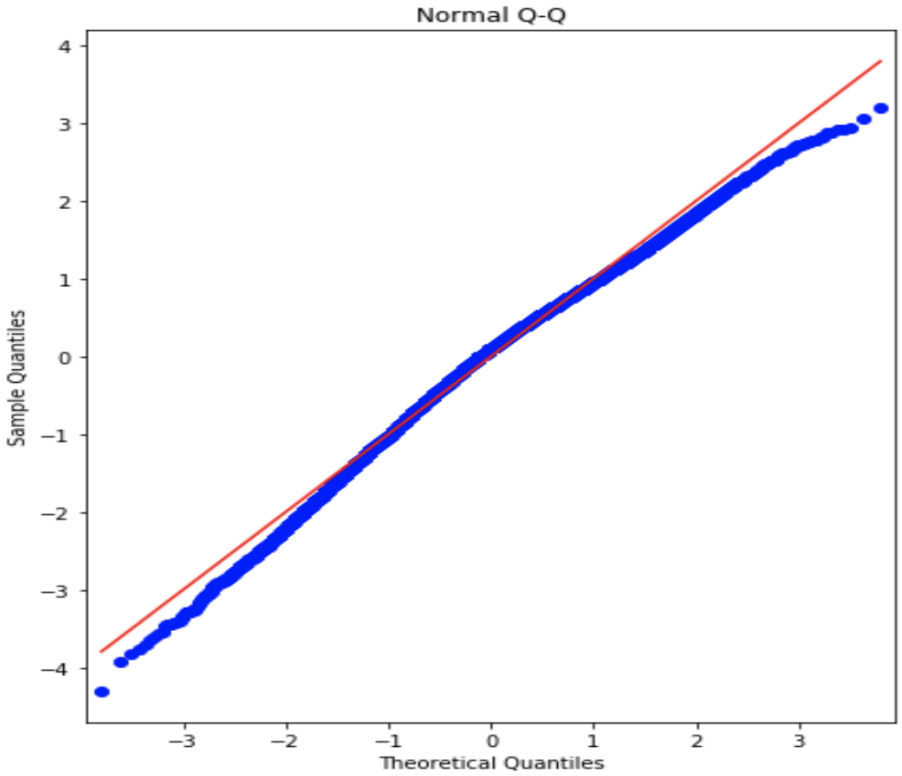


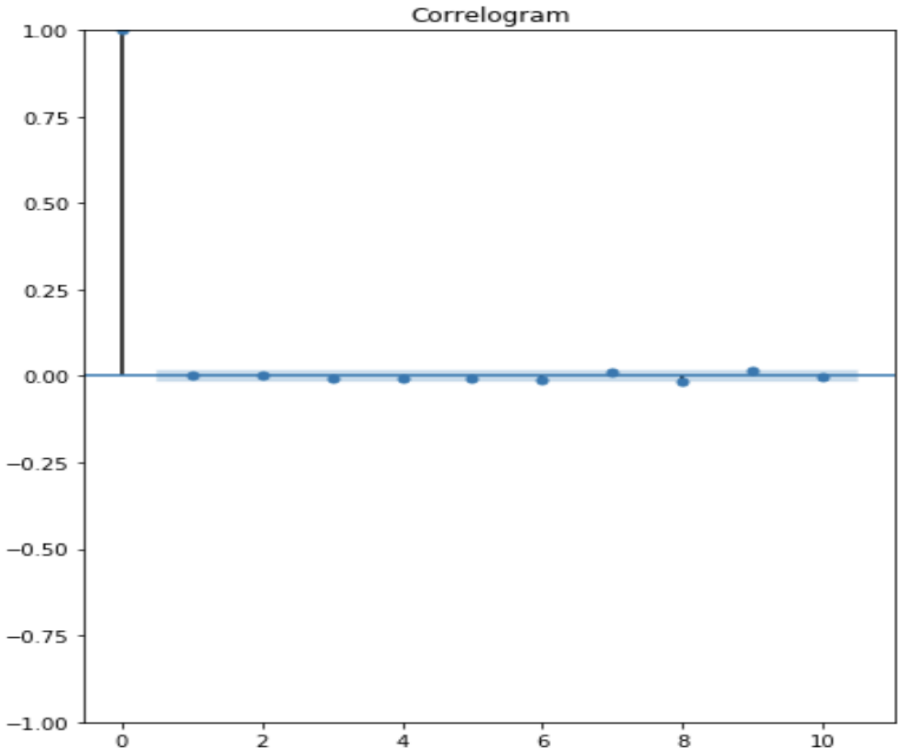
VI. ACP and PACP



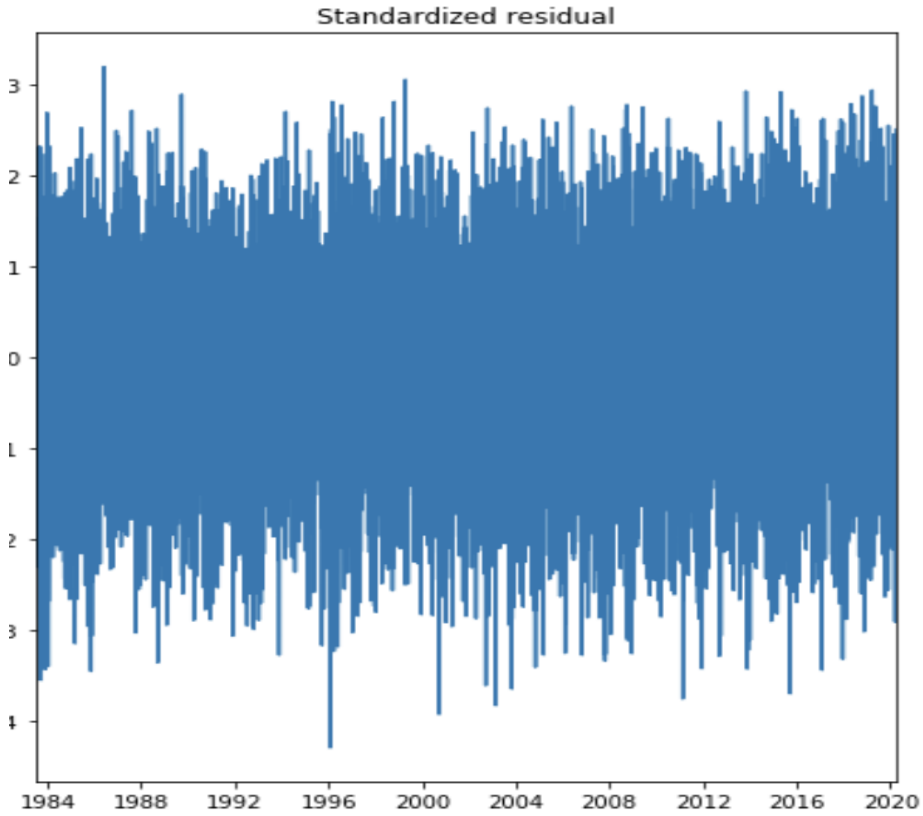


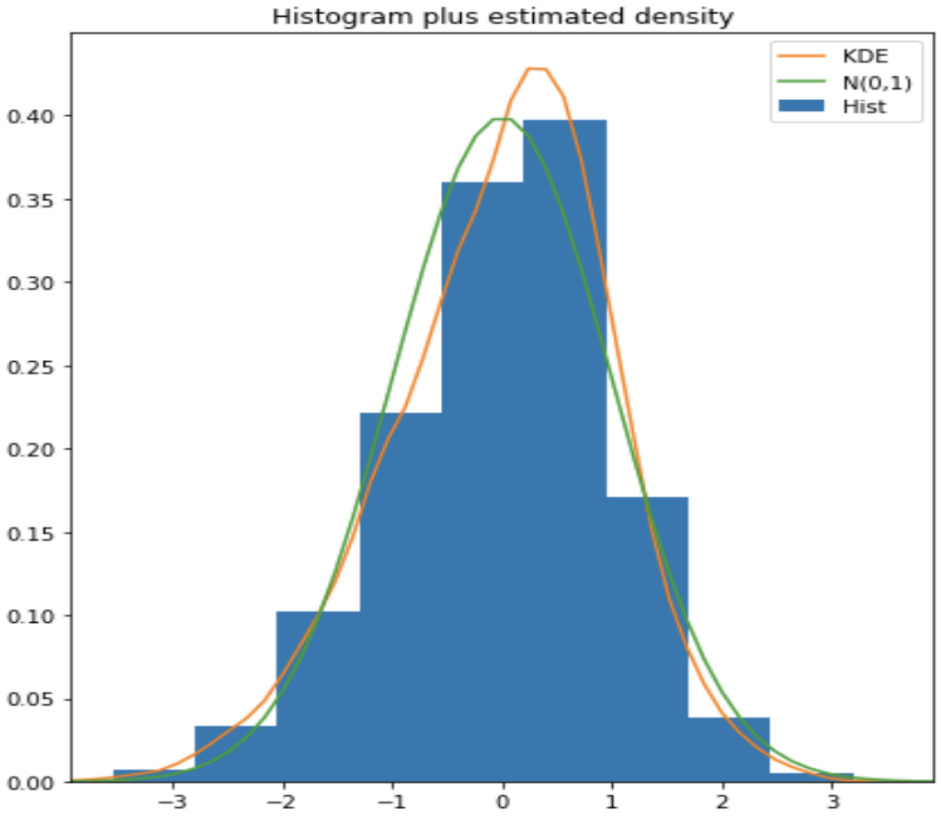
VII.ARIMA(1, 1, 1)x(0,0,1, 12) (yield to the lowest AIC) model





VIII Validating the model





IX. Visualization of model

Thank you!