▾ Time Series Analysis - PS05

Tasks

1. Choose an 'enviromental' time series *that interests you* that includes:

   - > 10 cycles worth of data
   - > 120 data points
   - you expect will have a trend and some seasonality

2. Import the time series into Python and convert (if necessary) into a Pandas DataFrame

   - perform as much of the coding as you can directly on the DataFrame

3. Analyze the time series to:

   - Detrend
   - Remove seasonality
   - Remove any additional cycles you observe

4. Check to see if your resulting data is:

   - normal
   - stationary
   - still shows any cyclicity
   - include statistics or plots that show your point

5. Explain:

   - in a few paragraphs explain:

     - the trend, which might include things like the rate of change (i.e. your best fit parameters)
     - the seasonality, which might include thigns like the period, the 'goodness of fit'

   - and include any appropriate images/figures in your colab within the text boxes

6. Perform at least one additional test on your data. Dealer's choice.

To include images:

hard, but customizeable:

or easy:

lots of markdown on the web, but here's a link to one good place: [the link example](#)

$y = x$

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