Robin

Robotic Process Automation (RPA)

Part 24 – 시계열 예측분석(Time Series) Facebook Prophet

2020. 8.

정 준 수 Ph.D.

Prophet 설치 방법

https://pystan.readthedocs.io/en/latest/windows.html

Fbprophet 설치 error 발생시(python 3.7 이상)

https://discuss.streamlit.io/t/streamlit-with-fbprophet/2284

```
conda create --name streamprophet37 python=3.7 pip #use python 3.7
conda activate streamprophet #activate the environment
conda install libpython m2w64-toolchain -c msys2 # install compiler
conda install numpy cython matplotlib scipy pandas -c conda-
forge #ensure dependencies
pip install pystan
pip install fbprophet
```

Forecasting: Principles and Practice

Rob J Hyndman and George Athanasopoulos
Monash University, Australia

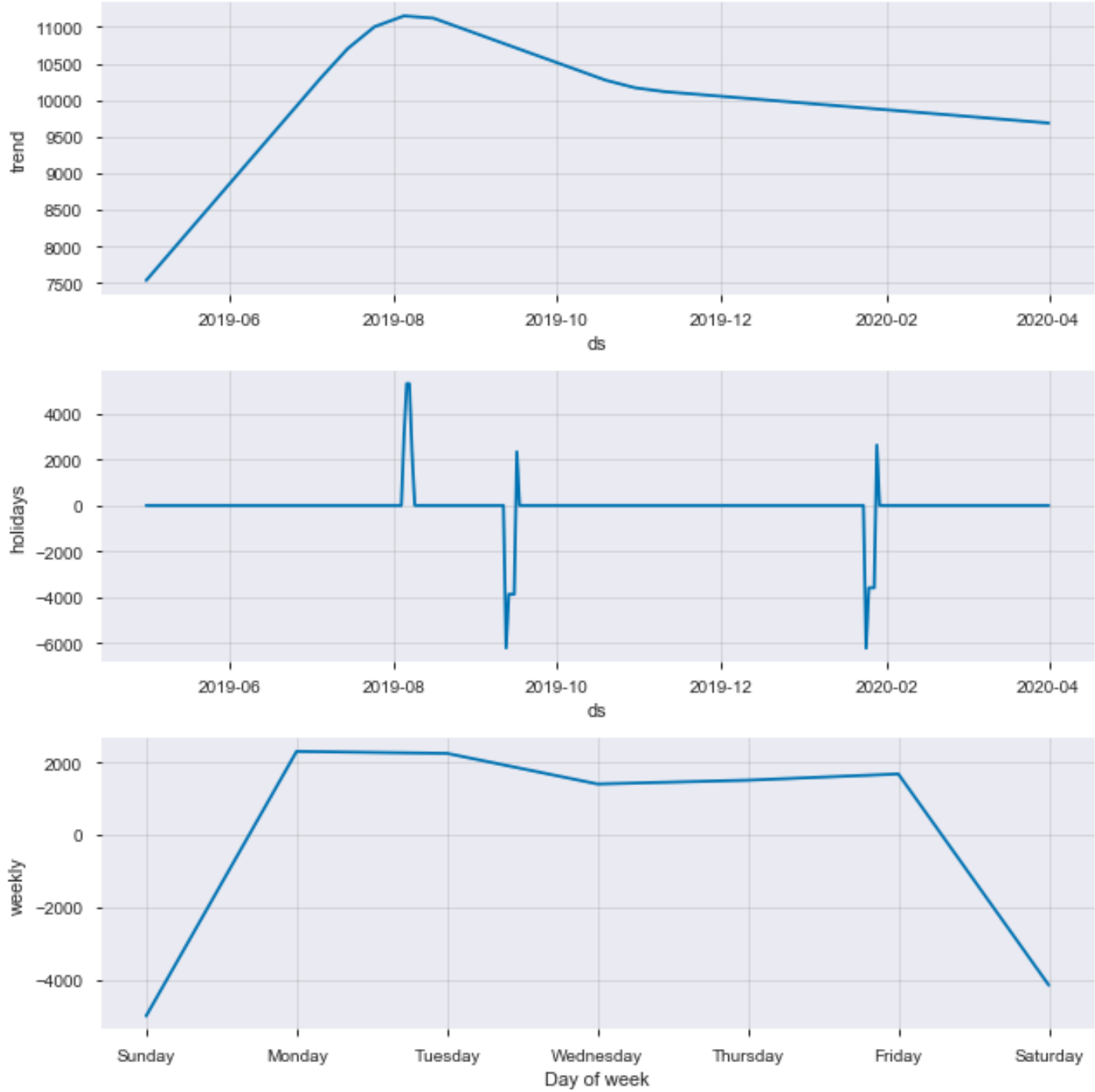
https://otexts.com/fpp2/

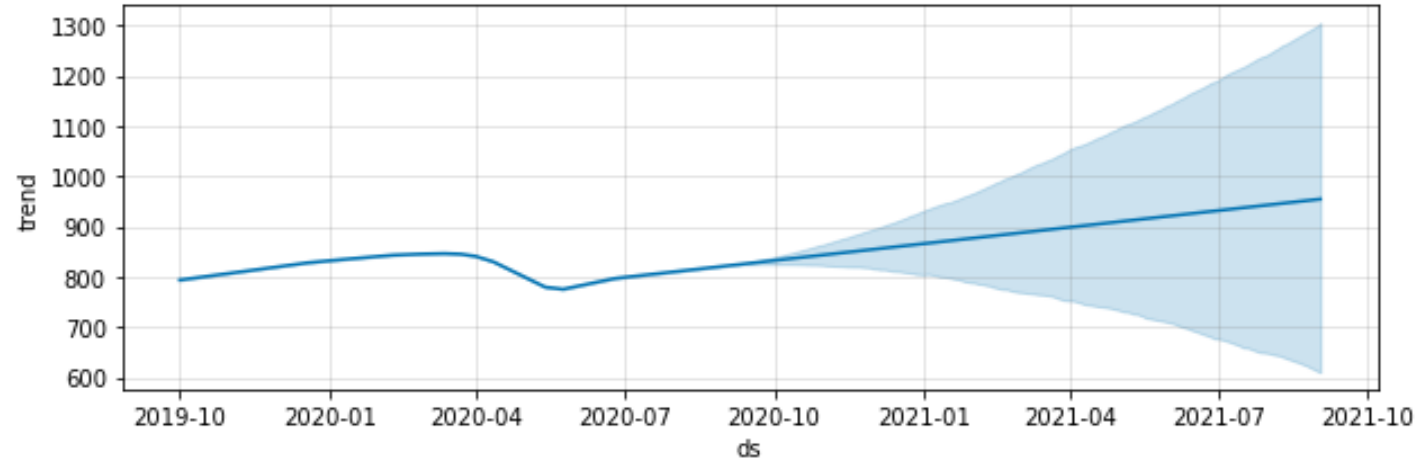
8.1 Stationarity and differencing

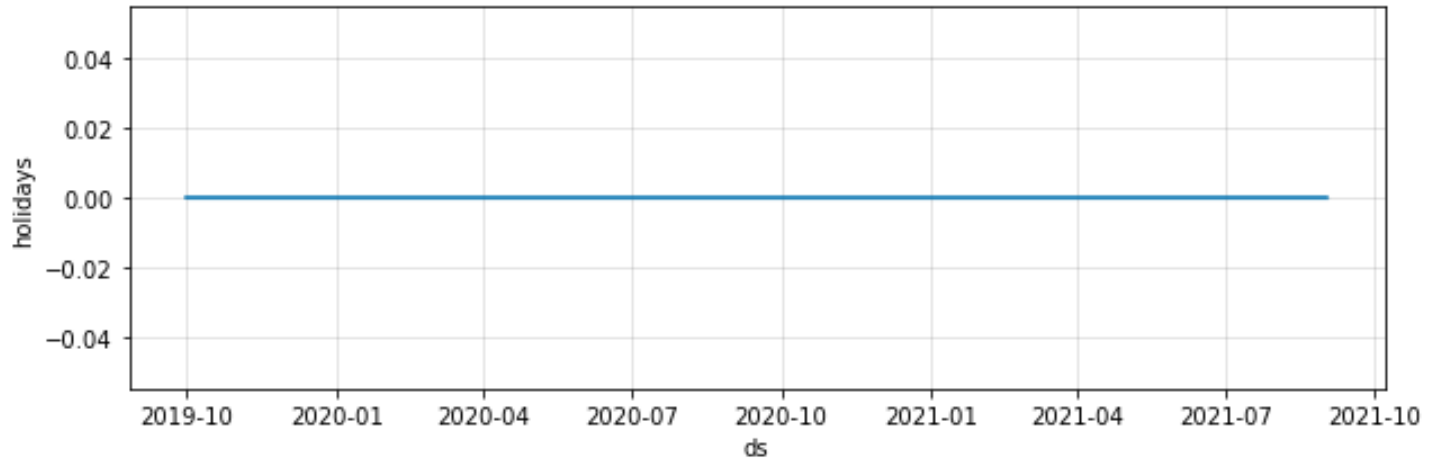
https://otexts.com/fpp2/stationarity.html

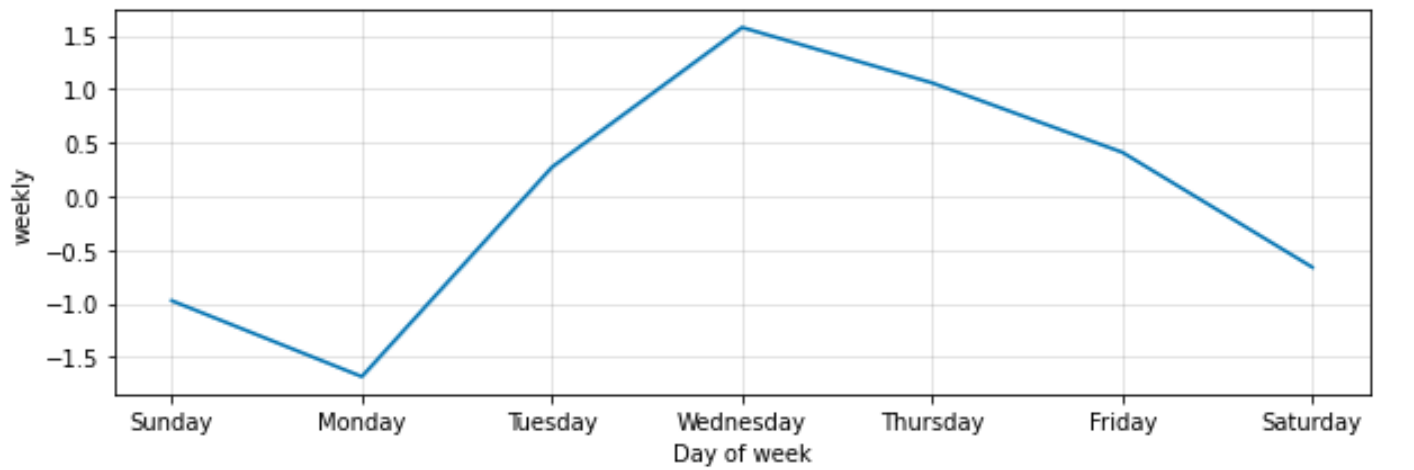
The Time Series Forecasting course provides students with the foundational knowledge to build and apply time series forecasting models in a variety of business contexts. You will learn:

- The key components of time series data and forecasting models
- How to use ETS (Error, Trend, Seasonality) models to make forecasts
- How to use ARIMA (Autoregressive, Integrated, Moving Average) models to make forecasts


trend
11000
10500
10000
9500
9000
8500
8000
7500
2019-06
2019-08
2019-10
2019-12
2020-02
2020-04
ds
holidays
4000
2000
0
−2000
−4000
−6000
2019-06
2019-08
2019-10
2019-12
2020-02
2020-04
ds
weekly
2000
0
−2000
−4000
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Day of week


trend
1300
1200
1100
1000
900
800
700
600
2019-10
2020-01
2020-04
2020-07
2020-10
2021-01
2021-04
2021-07
2021-10
ds


holidays
0.04
0.02
0.00
−0.02
−0.04
2019-10
2020-01
2020-04
2020-07
2020-10
2021-01
2021-04
2021-07
2021-10
ds


weekly
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Day of week

Examples and Codes

https://github.com/JSJeong-me/SDF-RPA

정 준 수 / Ph.D. (heinem@naver.com)

- 삼성전자 연구원
- 삼성의료원 (삼성생명과학연구소)
- 삼성SDS (정보기술연구소)
- (사)한국인공지능협회, AI, 머신러닝 전문강의
- 한국소프트웨어산업협회, AI, 머신러닝 SW전문강의
- 한성대학교 교수(겸)

Robin