MCU movie prediction

Lilian Gao
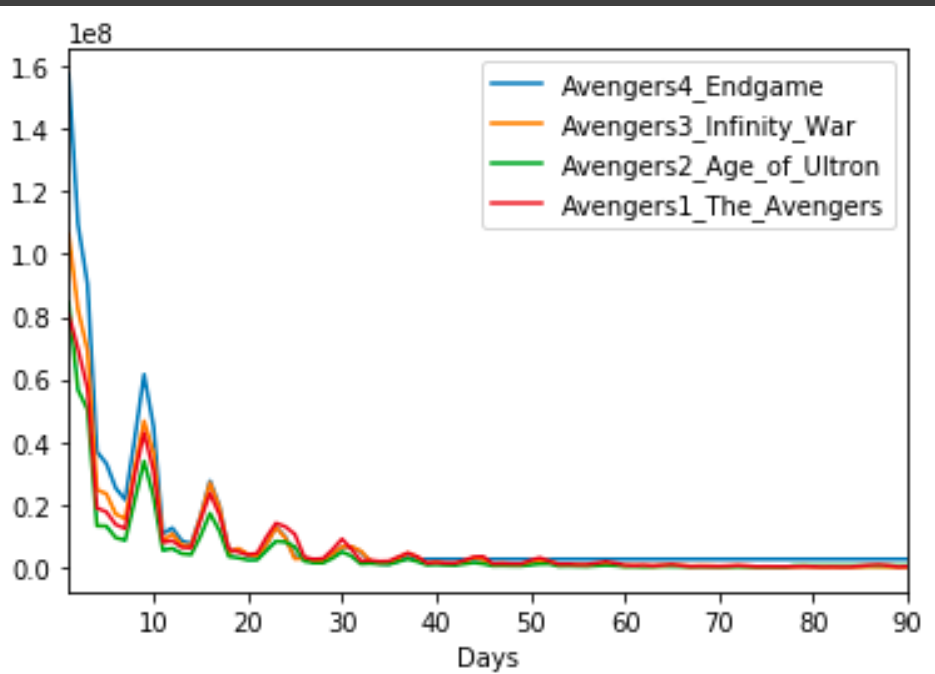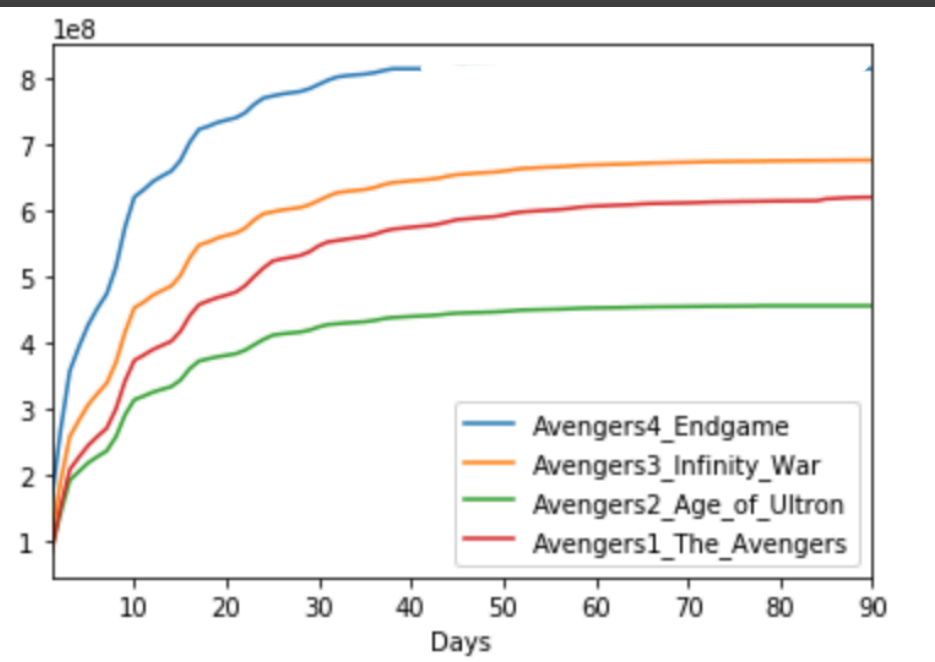
Data Collection

➤ Web scraping Html with Python & Beautiful Soup

➤ Daily box office performance of all MCU movies
  • Within 90 days after the opening
  • Domestic only

➤ Original table includes 8 columns

Date Rank   Gross % Change # Theaters Per Theater Total gross Days

"https://www.the-numbers.com/movies/franchise/Marvel-Cinematic-Universe"

Data Exploration
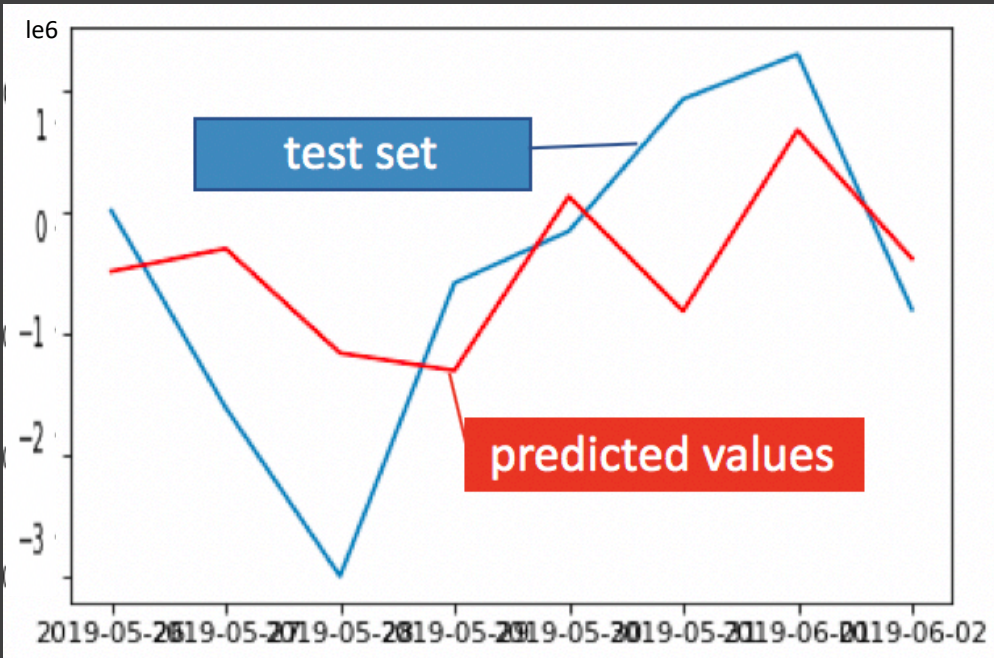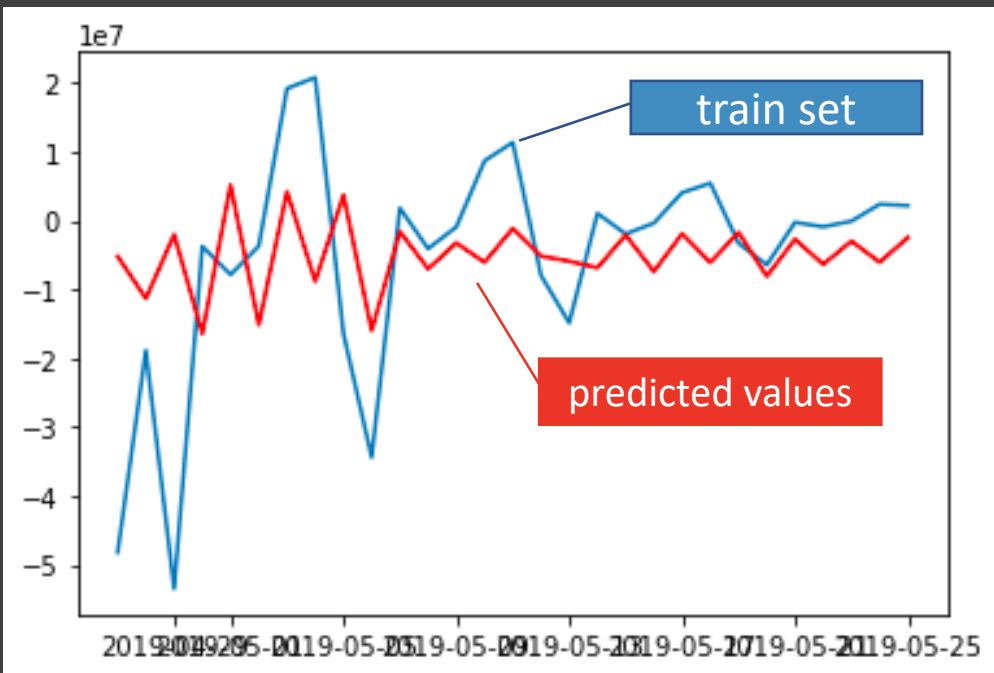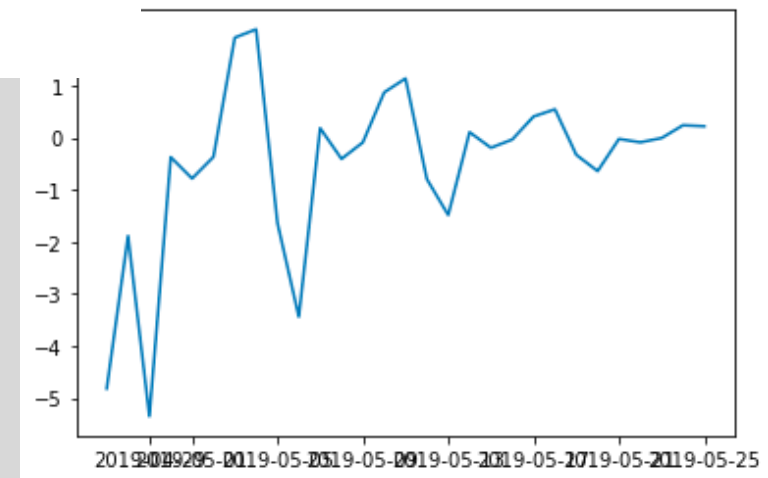
All (22) MCU movies
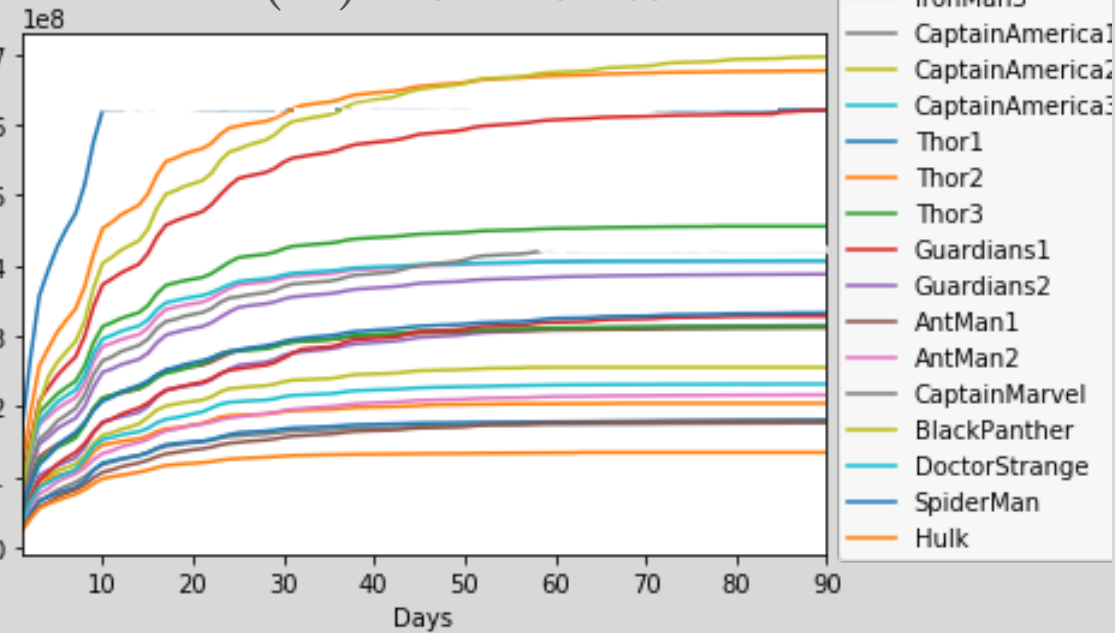
Model Fitting: Time Series ARIMA (1,0,0)
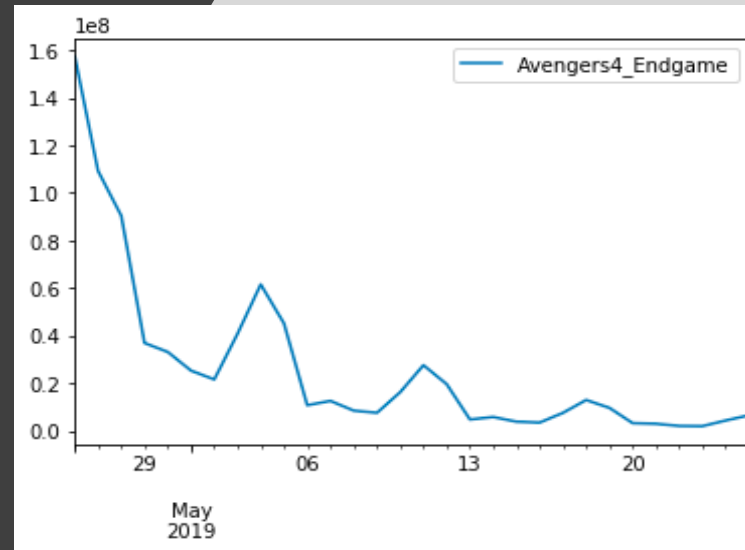
Differencing: Remove trend & seasonality

- Amazon EC2

- Input: Days to forecast starting from 5/26/2019
  Output: Predicted daily gross

- $ curl -H "Content-Type: application/json" -X POST -d '{"days":"7"}' http://ec2-3-17-205-24.us-east-2.compute.amazonaws.com:5000/end_game

- {" dgross " : {"5968707.7", "5672830.9", " 4516931.9", "3216635.9", "3350855.1", "2541035.2", "3220791,1" }}

Deployment

- Potential prediction models
  - More variables
  - Change of pattern after 30 days

- Performance of current model
  - On other previous MCU movies
  - On upcoming movies

Future Improvements