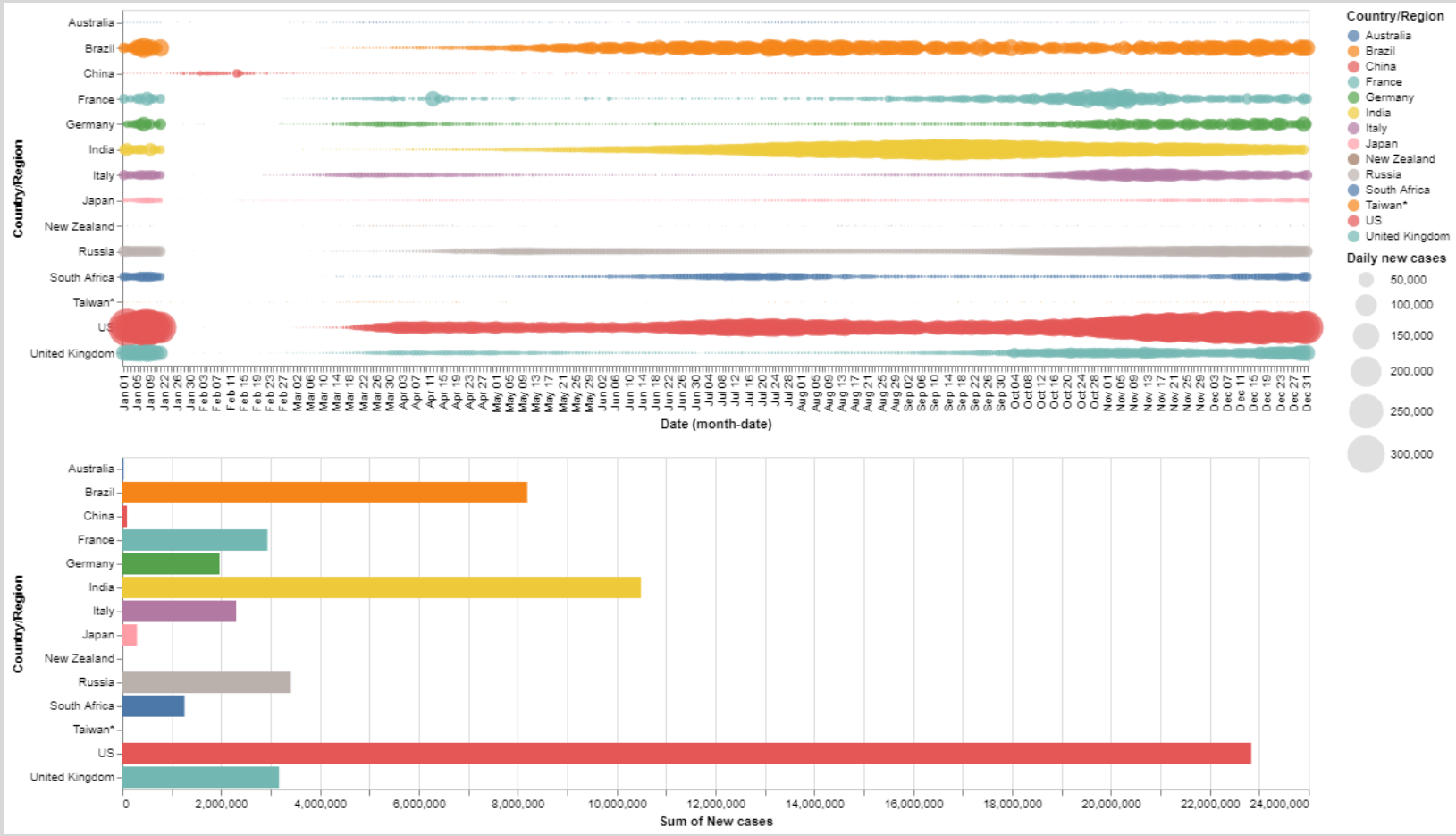
ACCURATE PREDICTION AND REVIEW OF COVID-19 DEVELOPMENT

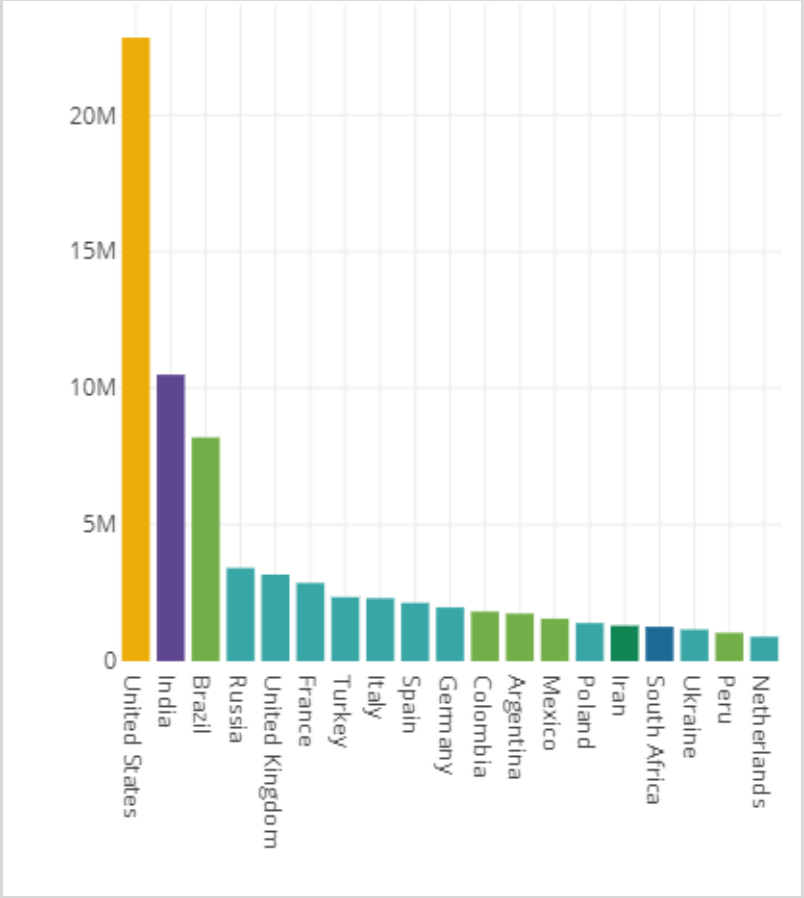
Data acquisition and cleaning

- COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) from https://github.com/CSSEGISandData/COVID-19
- World Bank Open Data from https://data.worldbank.org/
- COVID-19 pandemic data on Wikipedia from https://en.wikipedia.org/wiki/Template:COVID-19_pandemic_data
- World economy on Wikipedia from https://en.wikipedia.org/wiki/World_economy
- In total, 97,648 rows and 6 features in the raw dataset.
- Non-correlated features and NaNs were dropped.
- Cleaned data contains 3 features.
- Add three features and consolidate the data table.

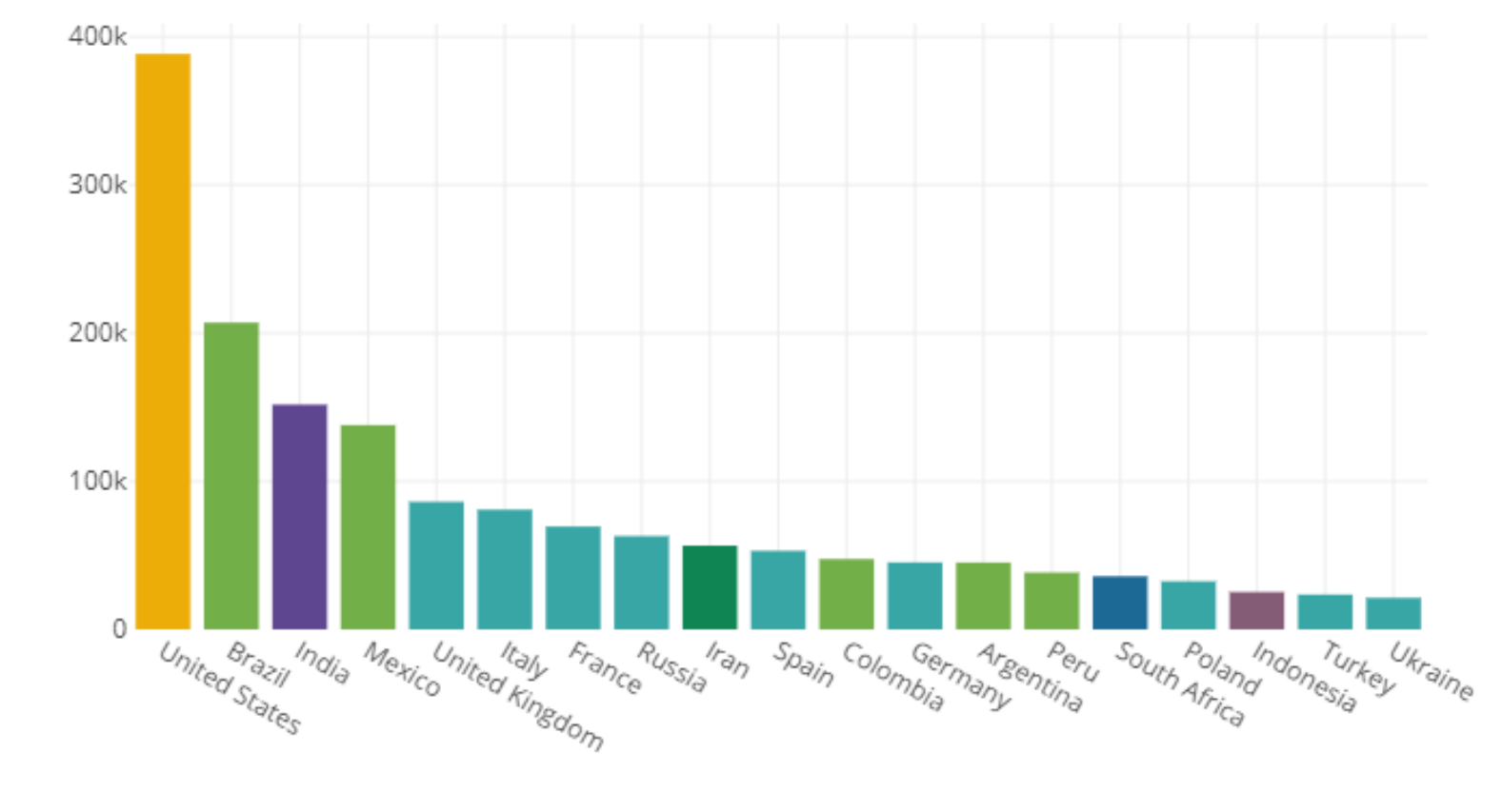
Countries with excellent results in fighting COVID-19



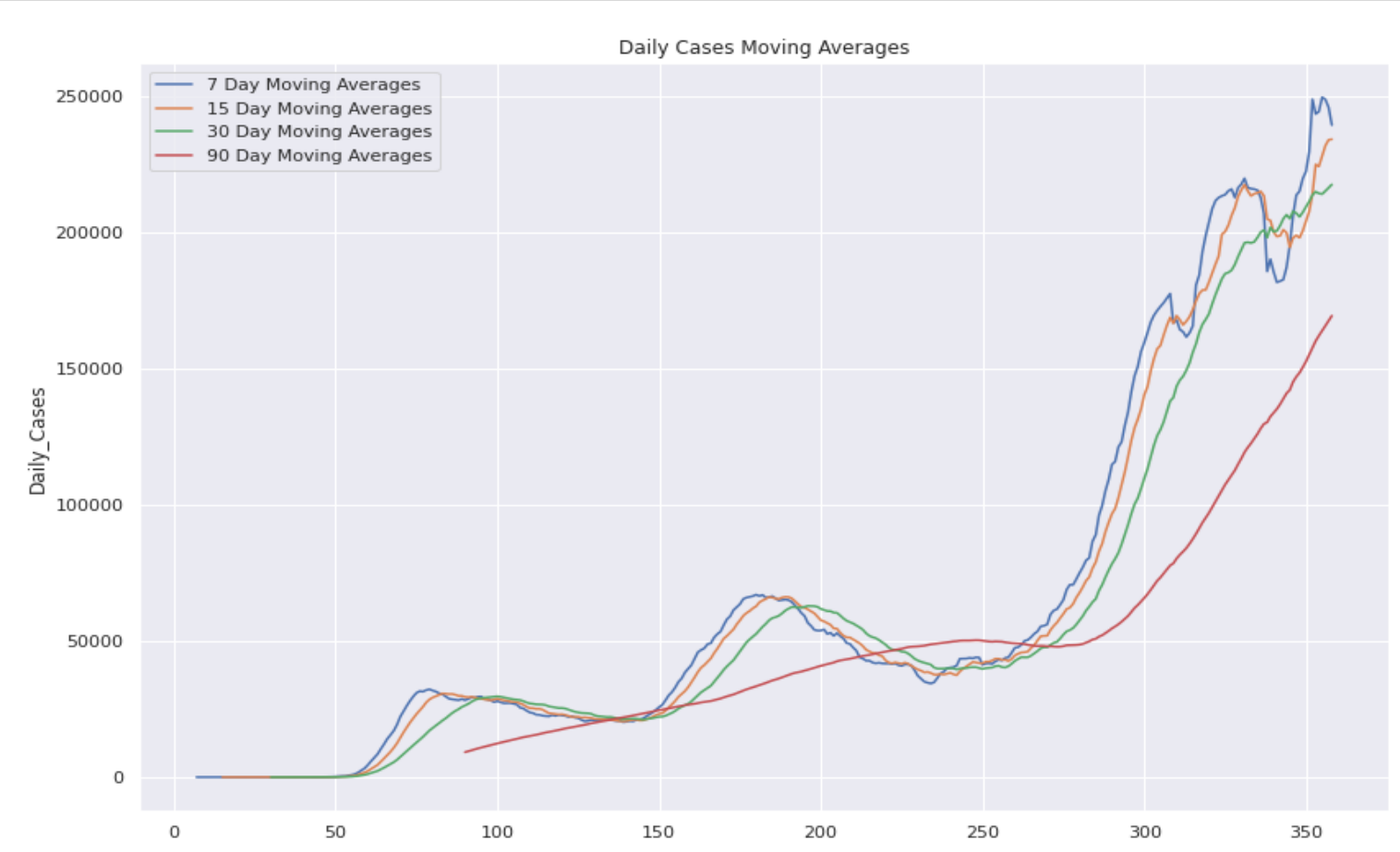
Search the top 10 countries with COVID-19 confirmed.



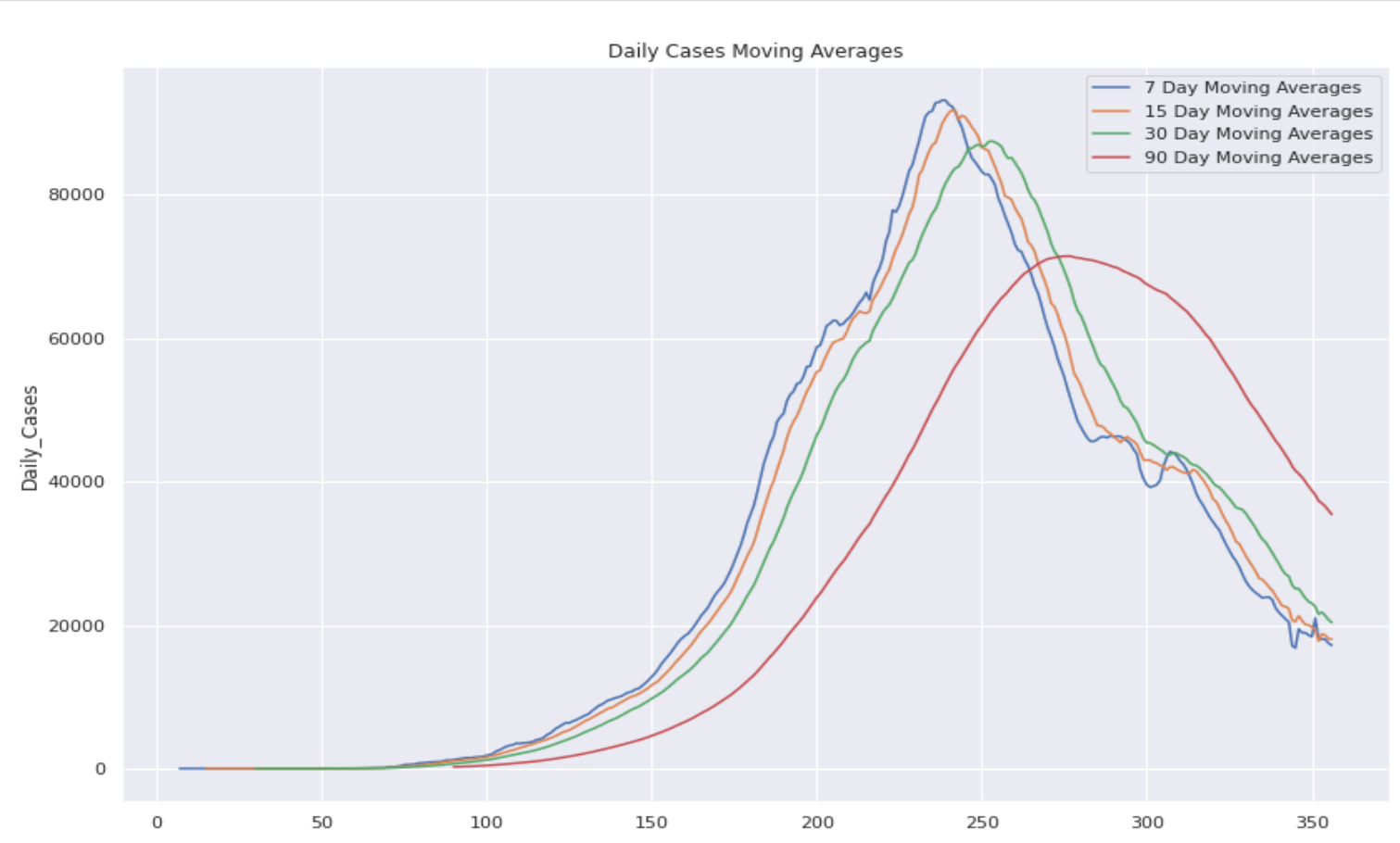
Search the top 10 countries with COVID-19 deaths



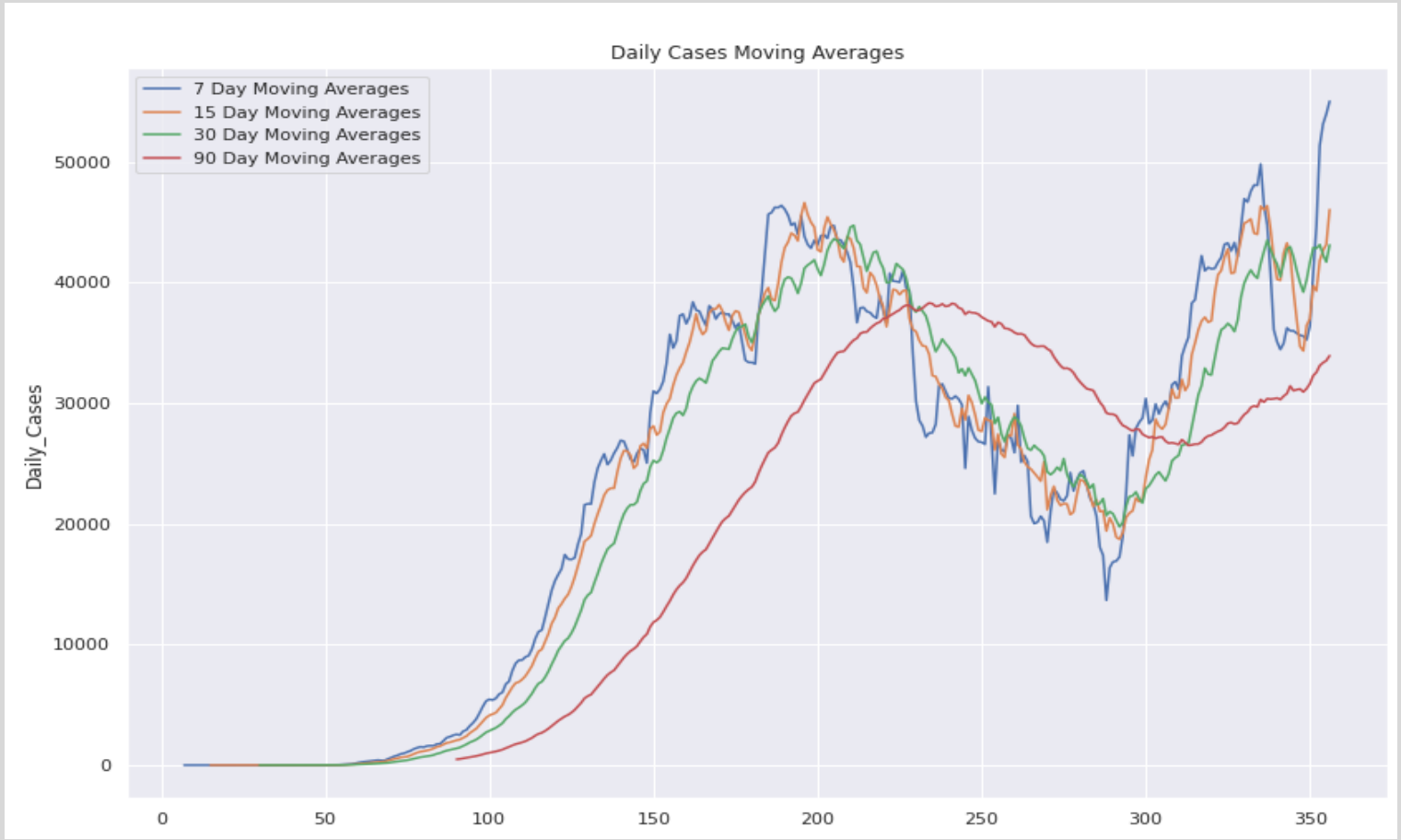
Regression models: analysis and prediction of COVID-19 trend in the USA



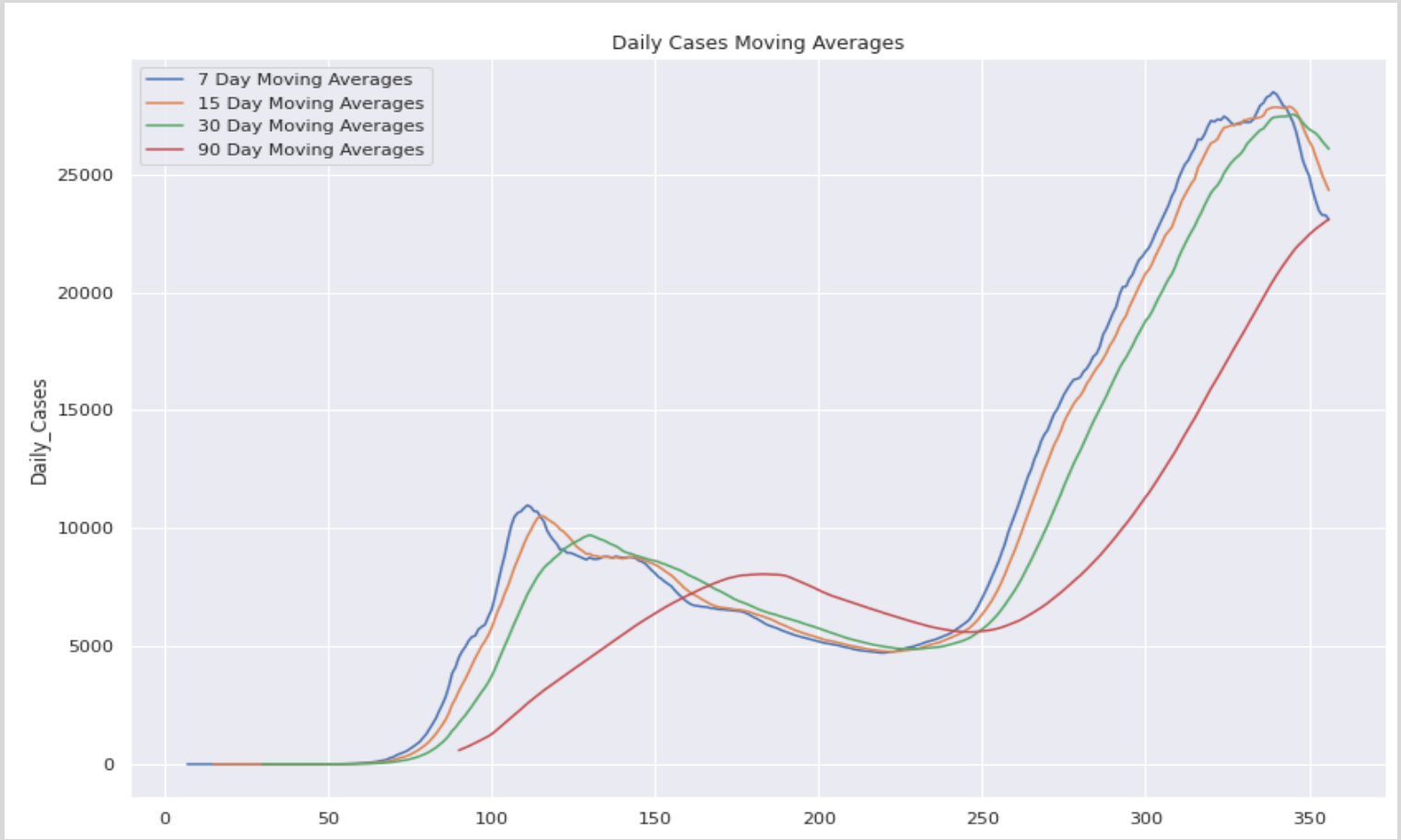
Regression models: analysis and prediction of COVID-19 trend in India



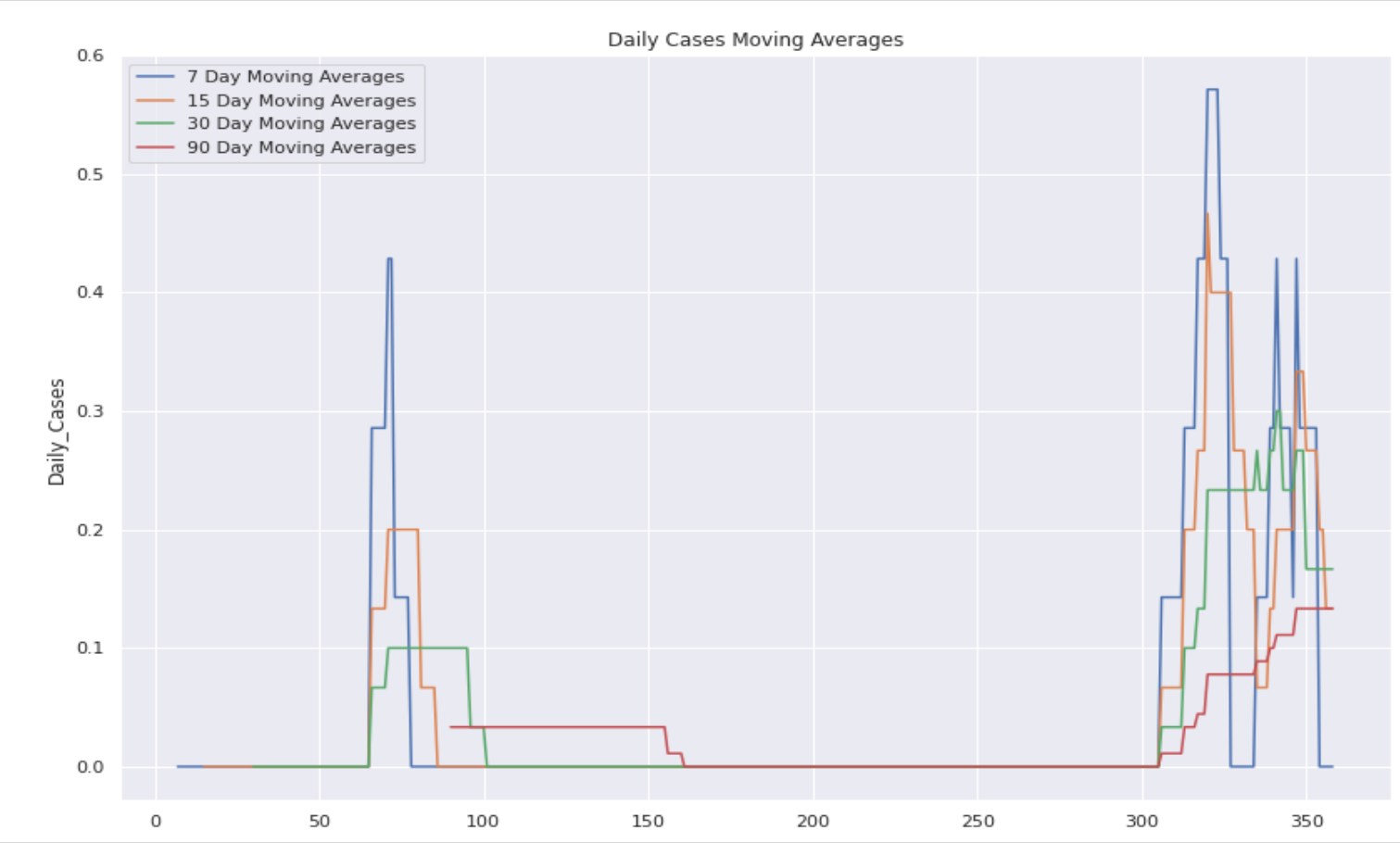
Regression models: Analysis and prediction of COVID-19 trend in Brazil



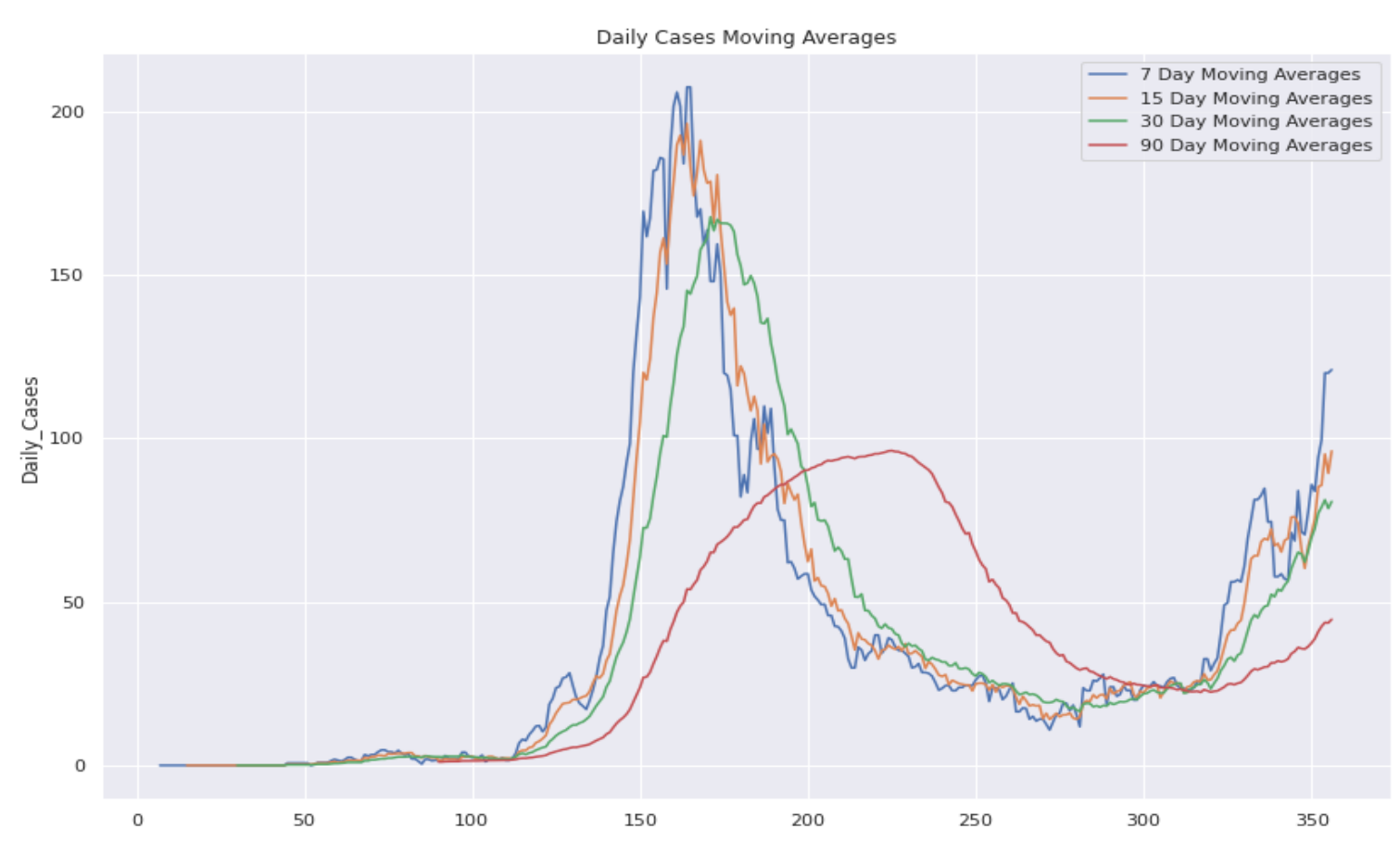
Regression models: Analysis and prediction of COVID-19 trend in Russia



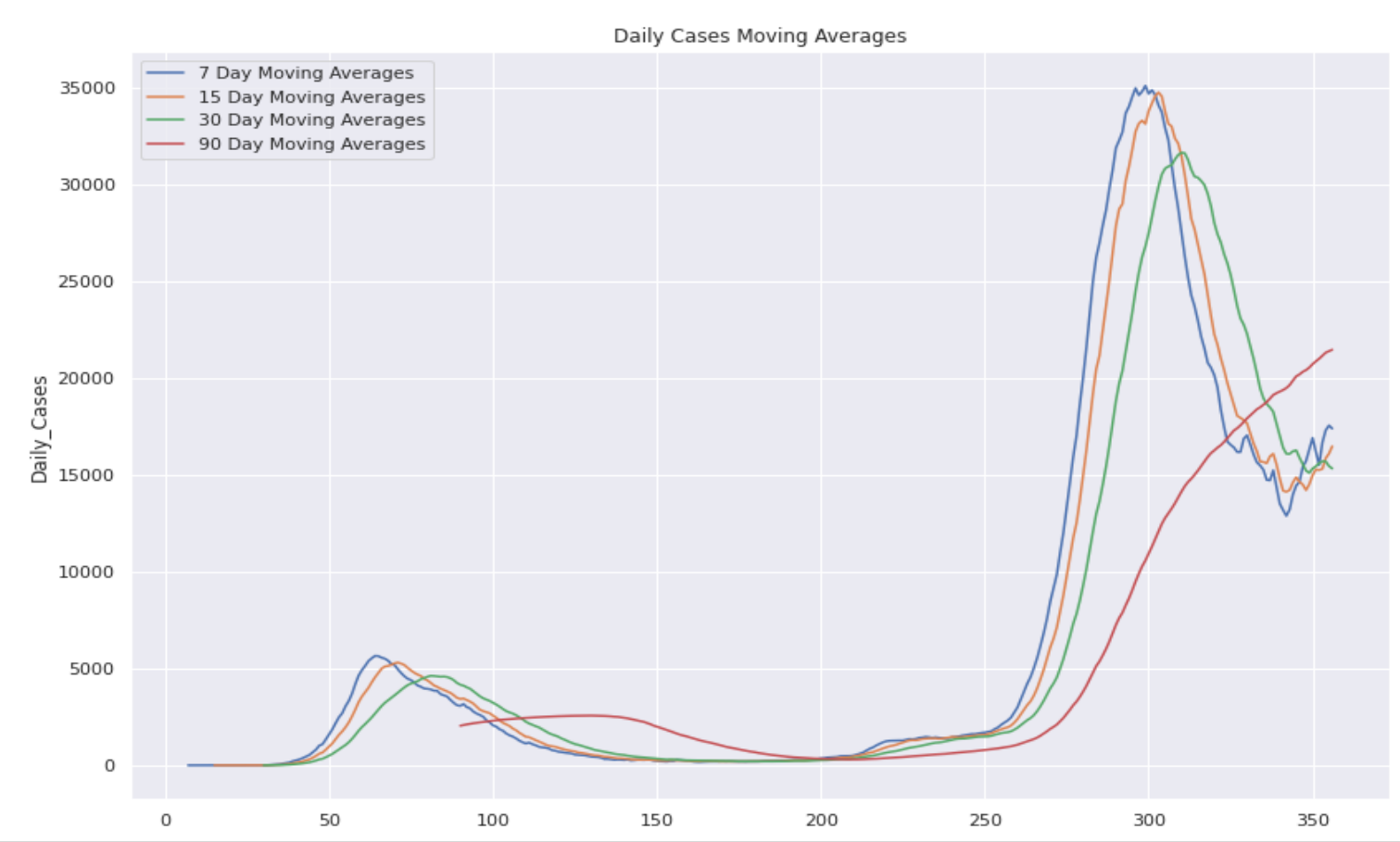
Regression models: Analysis and prediction of COVID-19 trend in UK



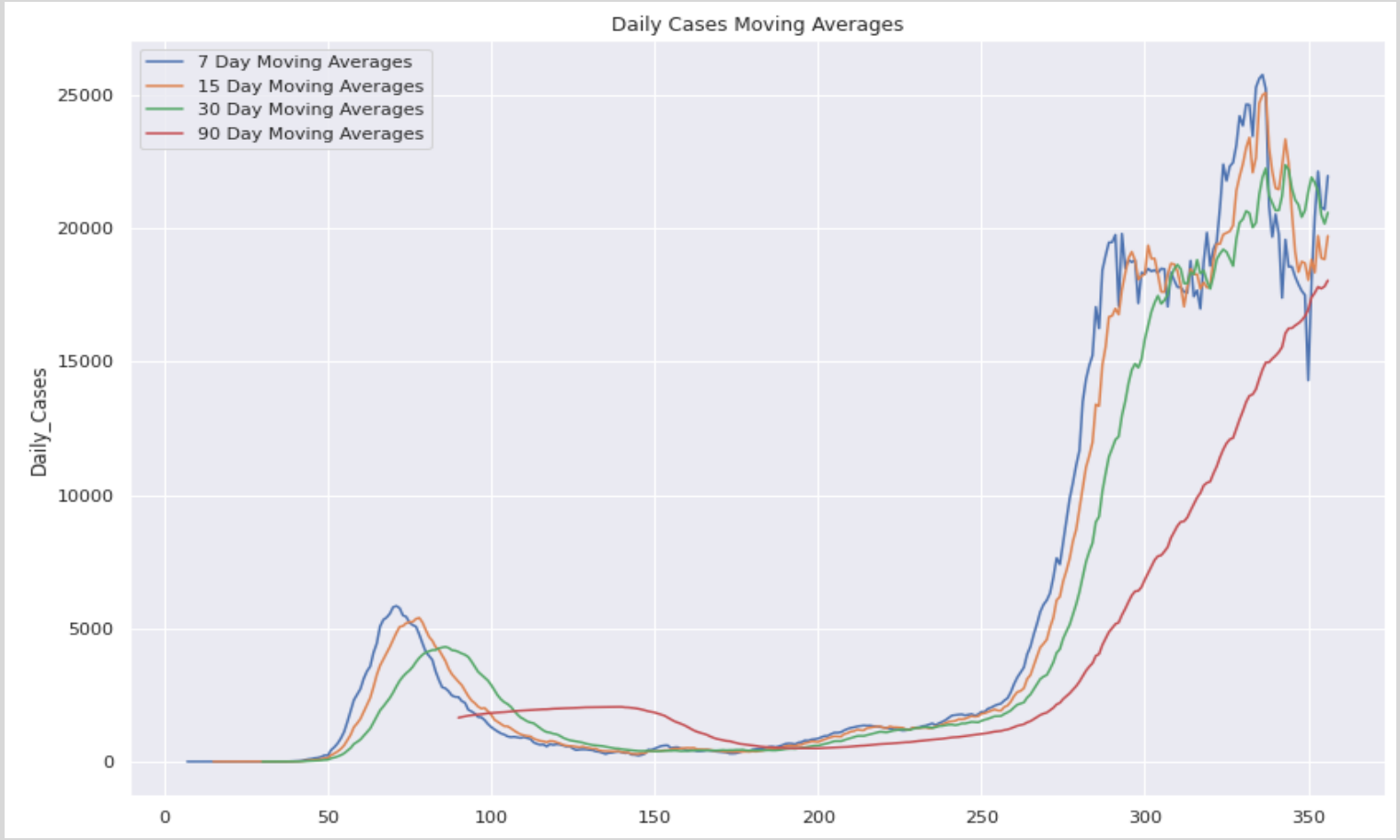
Regression models: Analysis and prediction of COVID-19 trend in France



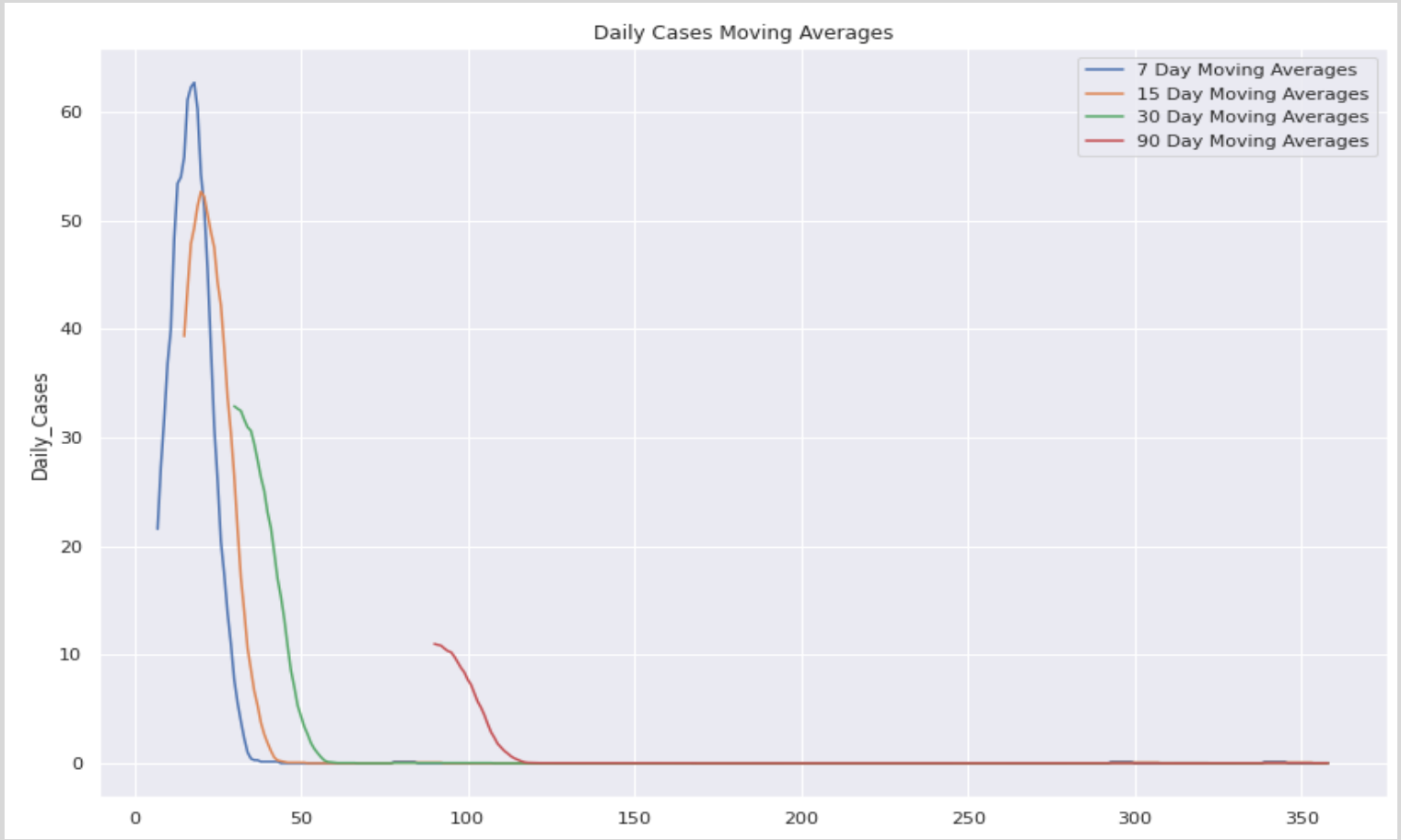
Regression models: Analysis and prediction of COVID-19 trend in Italy



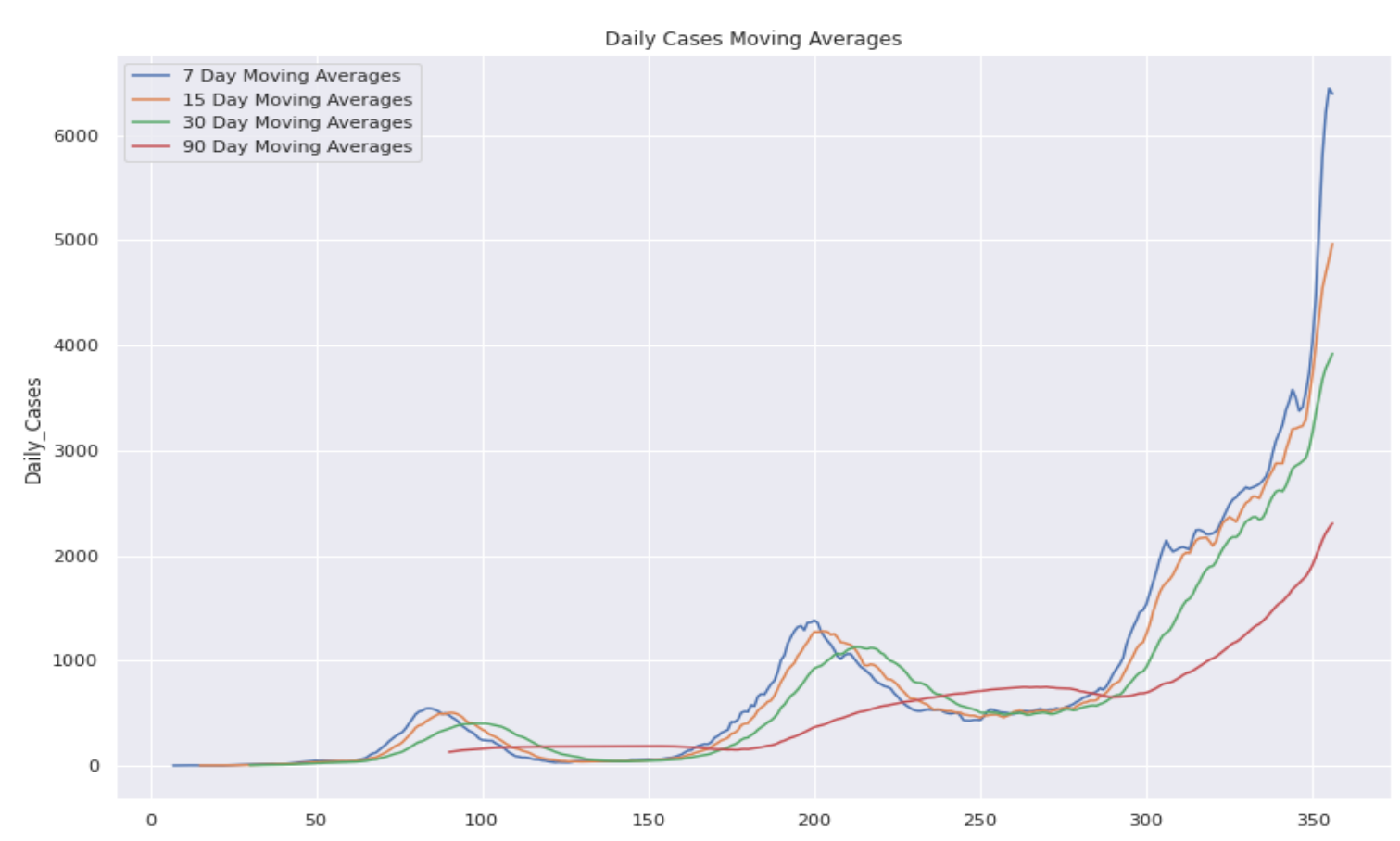
Regression models: Analysis and prediction of COVID-19 trend in Germany



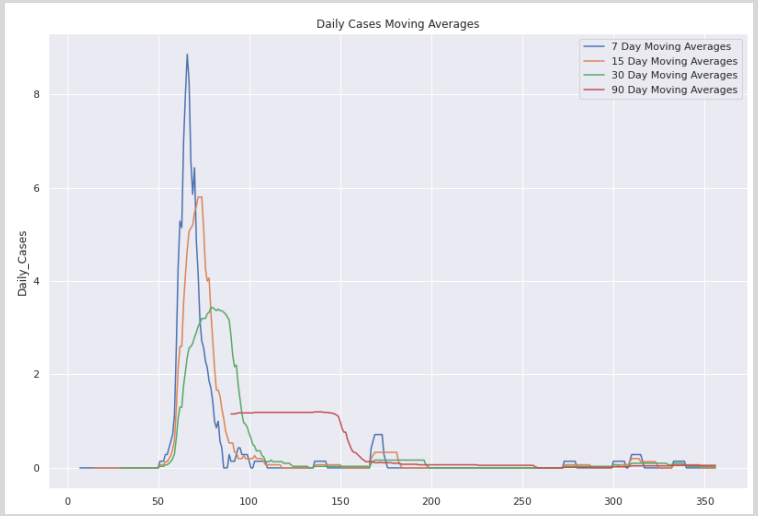
Regression models: Analysis and prediction of COVID-19 trend in China



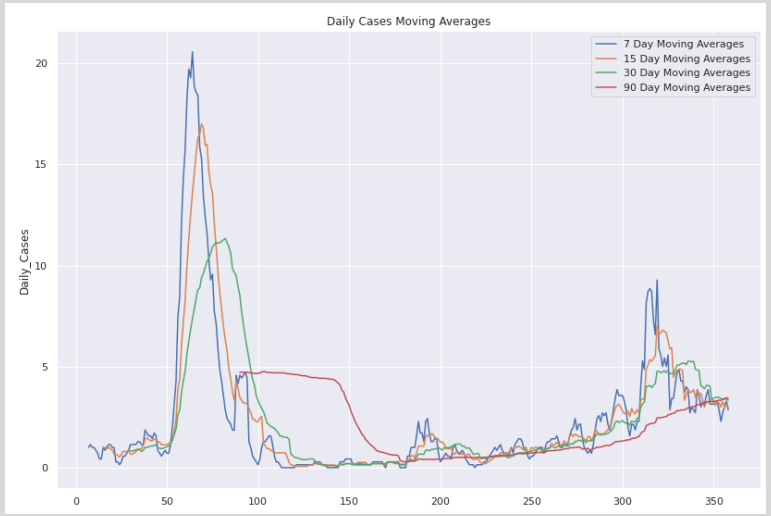
Regression models: Analysis and prediction of COVID-19 trend in Japan



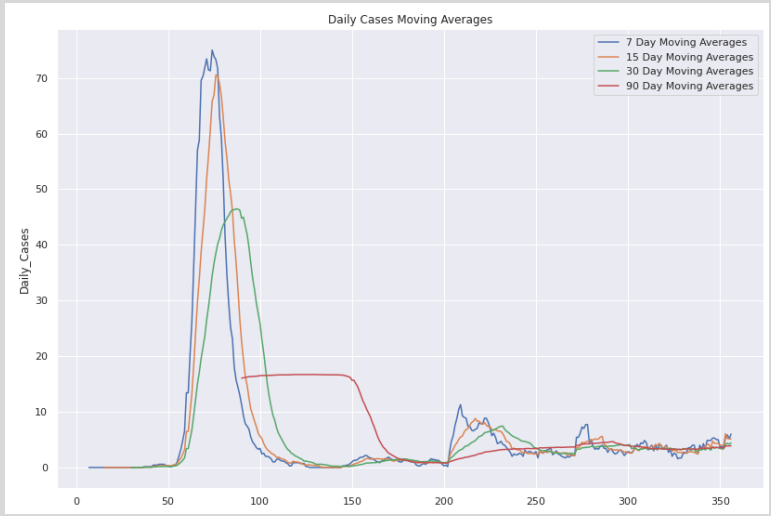
Regression models: Analysis and prediction of COVID-19 trend in the countries with outstanding anti epidemic ability



Australia



Taiwan



New Zealand

Conclusion and future directions

- Built useful models to predict whether and how much the COVID-19 epidemic situation would increase or decline.
- Accuracy of the models has room for improvement.
- Capture more of the COVID-19 individual traits.

- Hoped that more data scientists will invest in studying virus trends in the future, to provide relevant strategies for governments to effectively combat COVID-19.