

OBJECTIVES

The objective is to determine the future covid 19 cases.
Using the linear regression, polynomial regression and ridge regression. To estimate of future cases. The main aim of this is to support health systems in with COVID-19 strategic decision making, planning, and health policy formulation that help in the fight against COVID -19.

MATERIALS & METHODS

The following materials were required To complete the Project.

1. Linear Regression
2. Polynomial Regression
3. Bayesian Ridge
4. matplotlib.pyplot imported rc parameters
5. DecisionTreeRegressor
6. PolynomialFeatures from sklearn.preprocessing

INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment. However, some will become seriously ill and require medical attention. The virus can spread from an infected person's mouth or nose.

RESULTS1

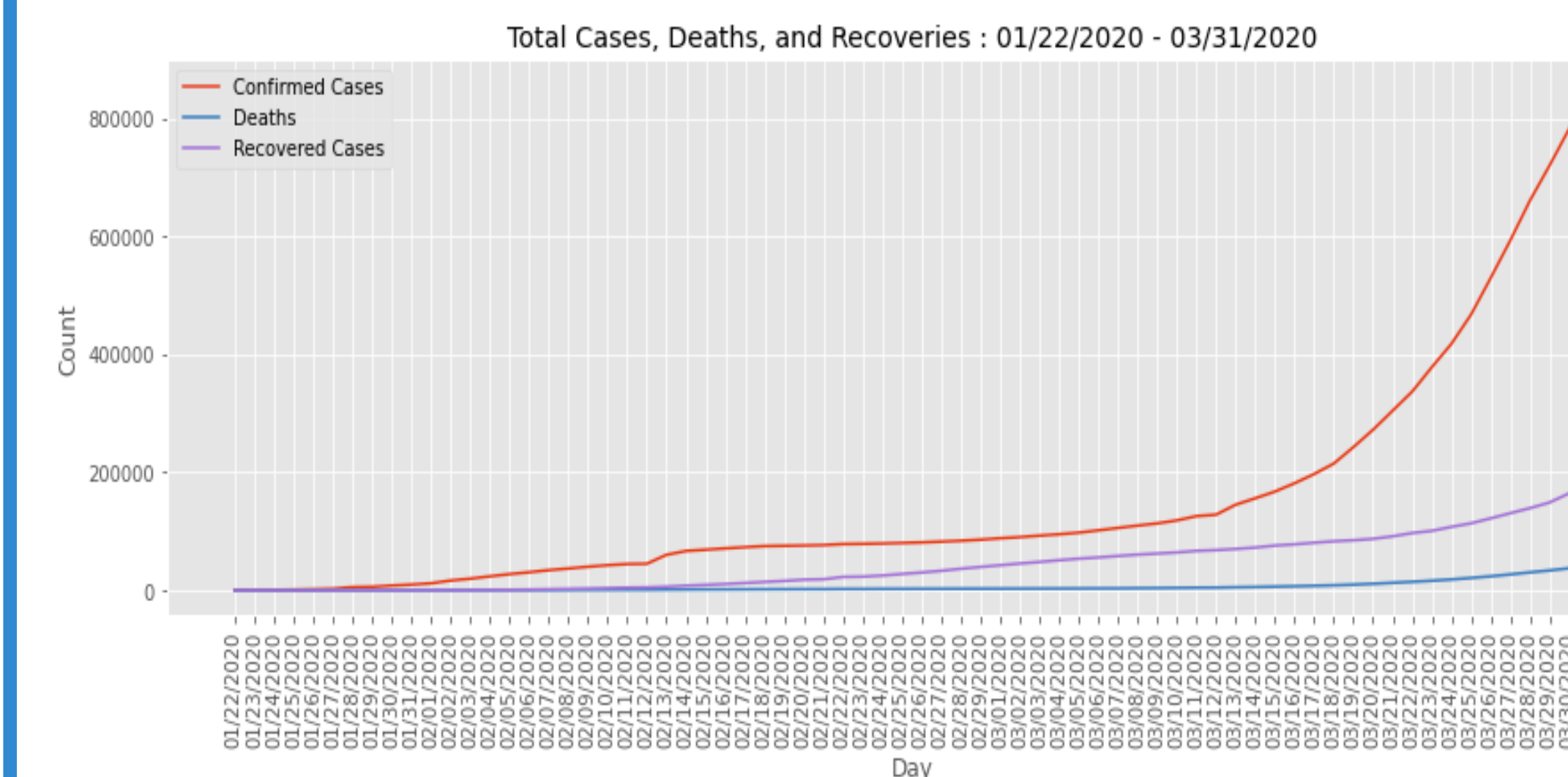


Figure 1: Total cases, Deaths and Recovered

The Growth factor is higher For the Active cases means The virus is spreading at a Higher rate. Whereas at the beginning of First 25 days the factor was Greater than one.

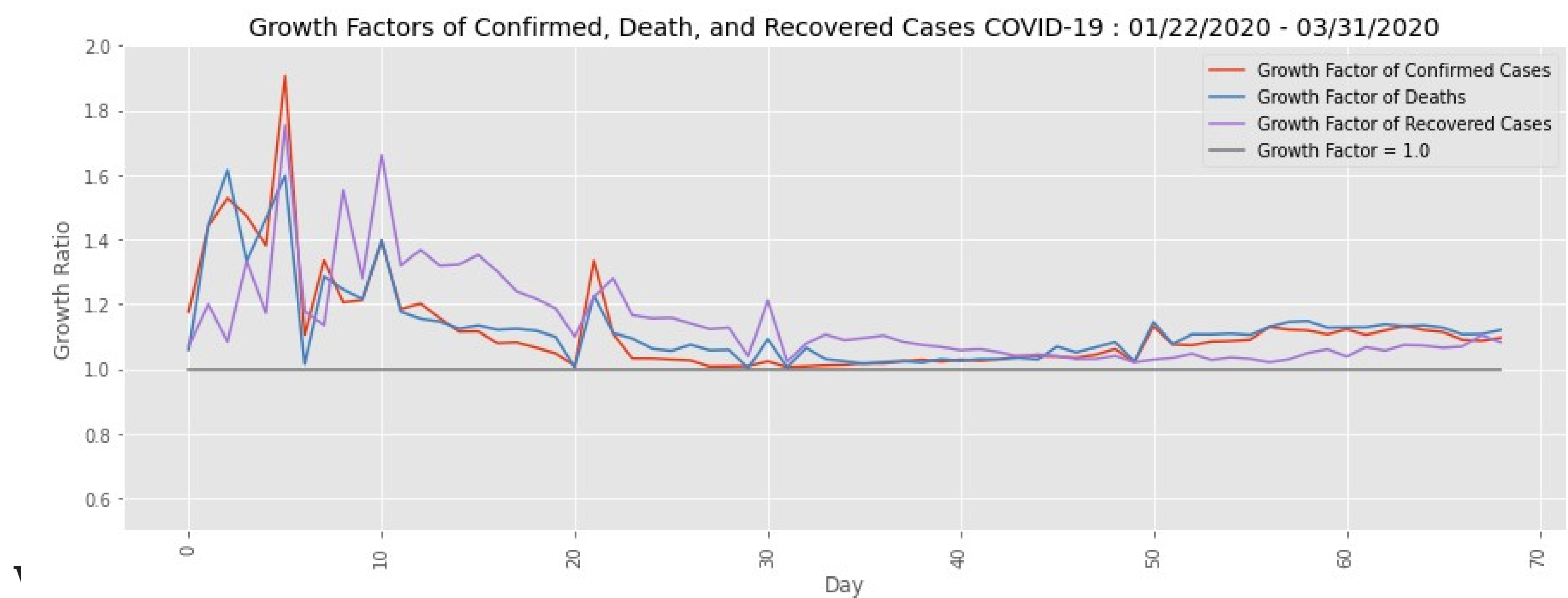


Figure 2: Growth factor linked

CONCLUSION

We had estimated the covid cases from what the data we had. We had trained the data and tested with our algorithms. As we can see in the results our estimations were pretty good.

At the time of the pandemic. We had suffered due to the lack of oxygen, beds and doctors and medical staff and drugs. If this estimation was done during the real time, then we could be taken care of all the Necessary things like oxygen, the no of required beds. We would have been increased the Production of the oxygen, drugs, beds and appoint the required proportion of medical staff. The estimation was so good so that our economy wouldn't be effected much. So I want to say is if we would use this types of models to predict the future and we can Reduce our economy loss.

RESULTS2

Figure1

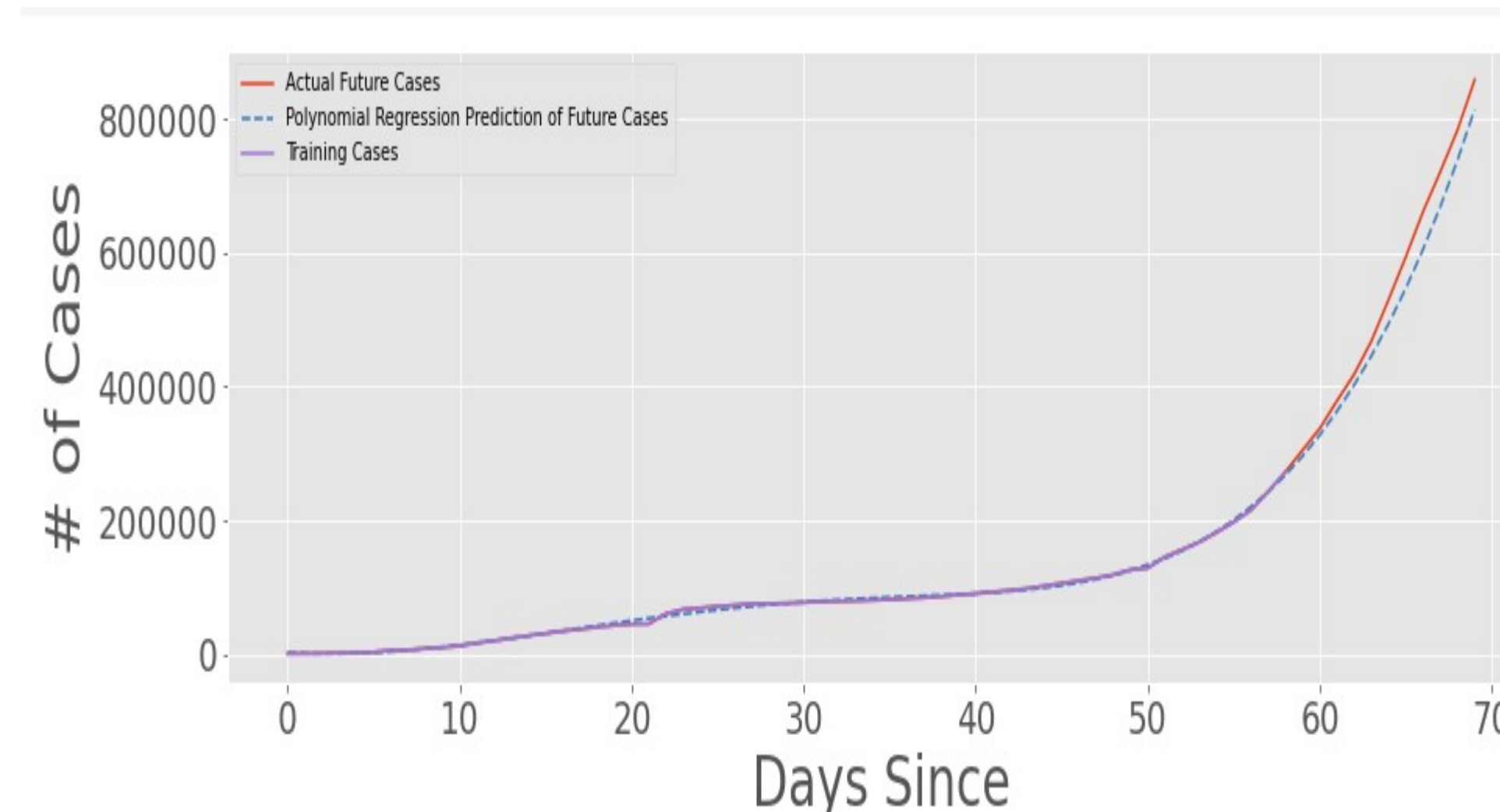
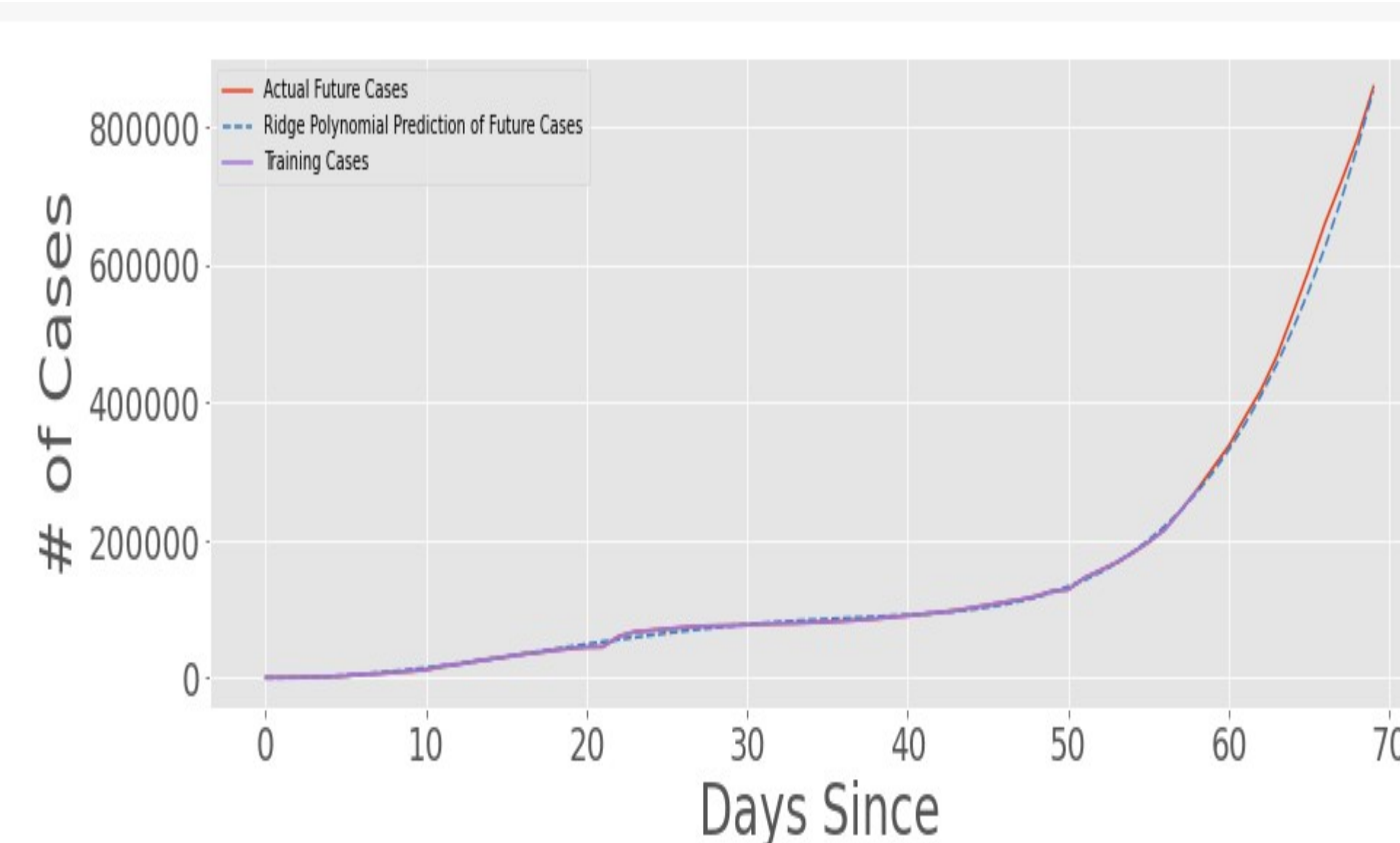


Figure2



REFERENCES

- [1] Dataset: https://raw.githubusercontent.com/PranavTadimetri/Regression_Project
- [2] Fmml Project 6

Result2 (cont)

Figure 1: Polynomial Regression
MAE: 31989.752678661967
MSE: 1314905592.3565953

Figure 2: Ridge Polynomial Regression
MAE: 15796.249691585459
MSE: 352570947.93456024

MAE: Mean Absolute Error

MSE: Mean Squared Error values

CONTACT INFORMATION

Pallala Arun Kumar
Fmml 20210760