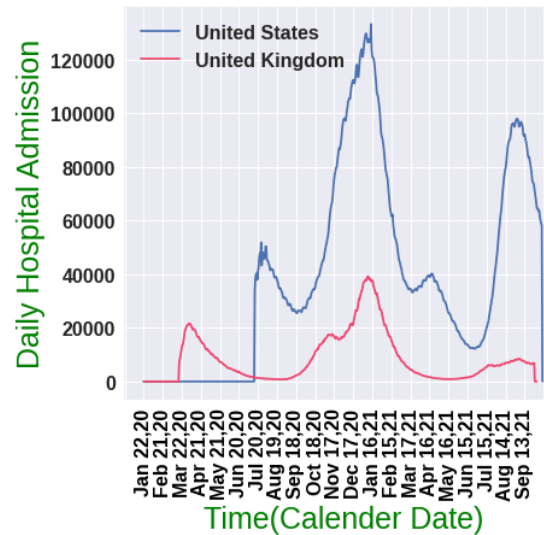
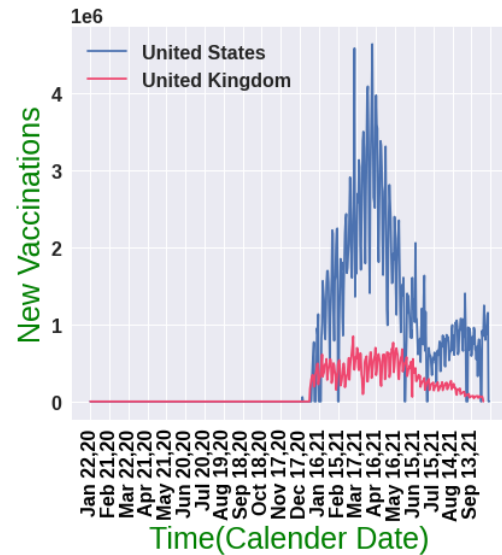
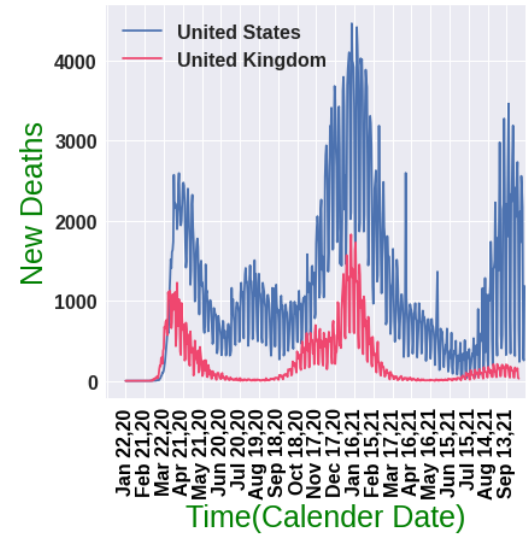
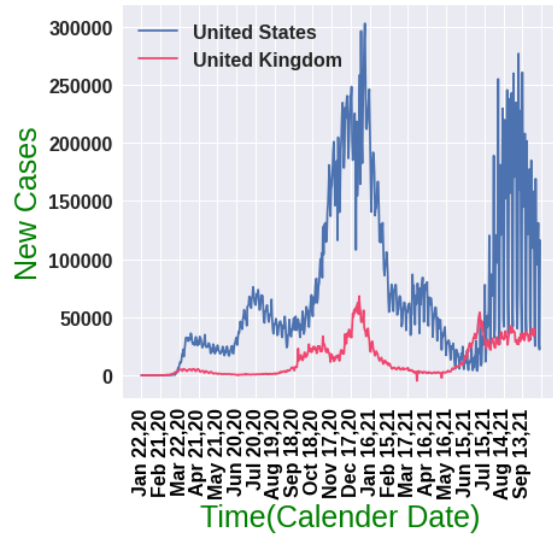


Forecasting of COVID-19 cases using a custom deep learning architecture incorporating vaccination

Md Toki Tahmid, Tanjeem Azwad Zaman, Ahmed Mahir Sultan Rumi, Abu Humayed Azim
Fahmid, A.H.M. Osama Haque, Rownok Zahan Ratul, Nafis Karim

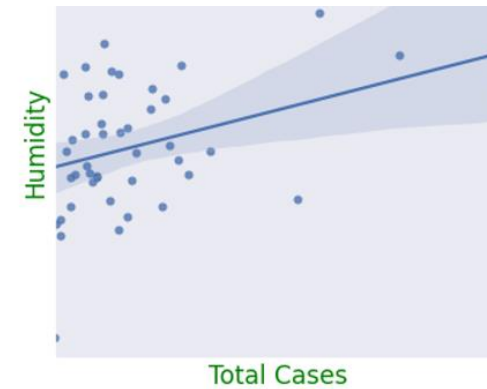
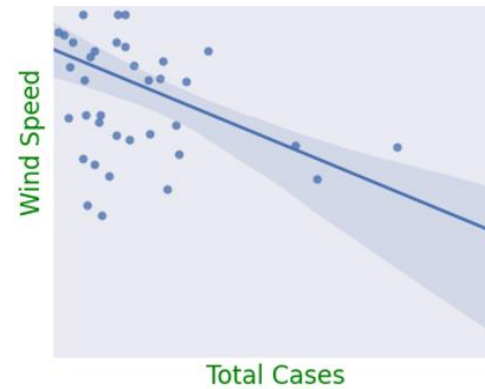
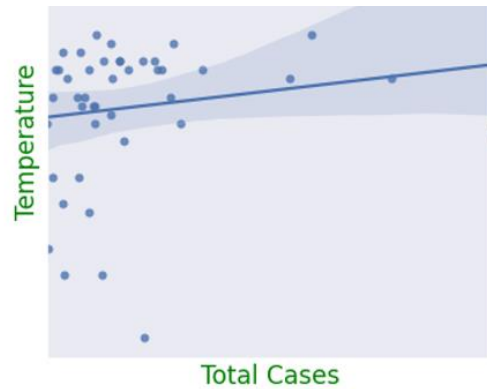
Motivation



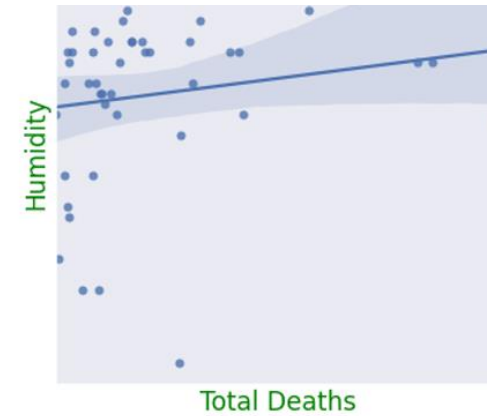
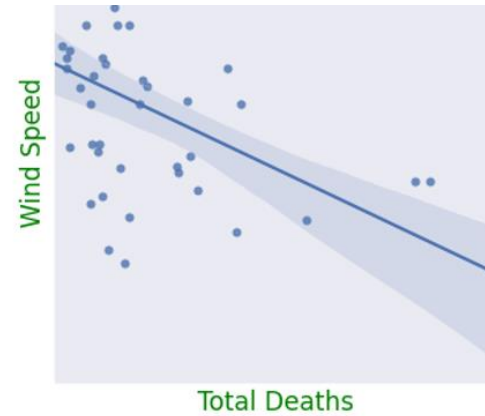
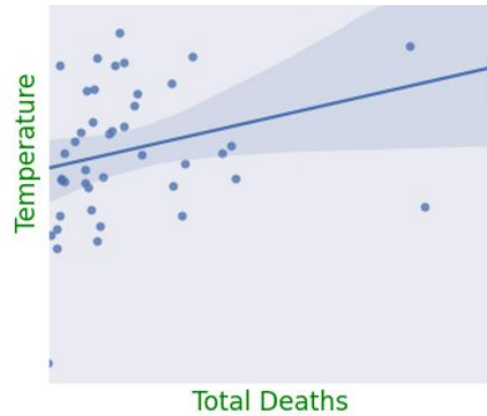
How different factors are correlated?

Environmental Factors

USA

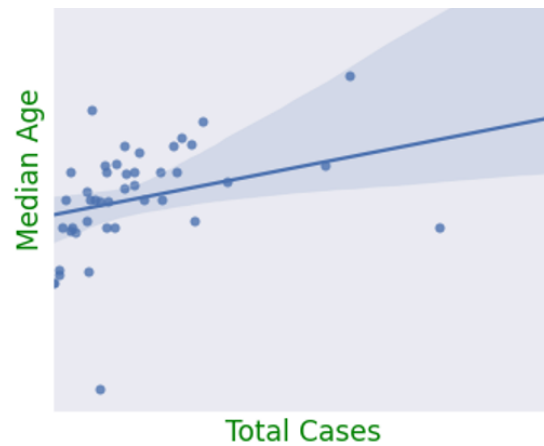
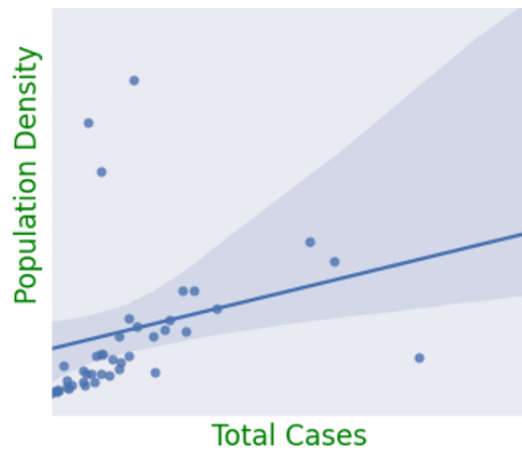


UK

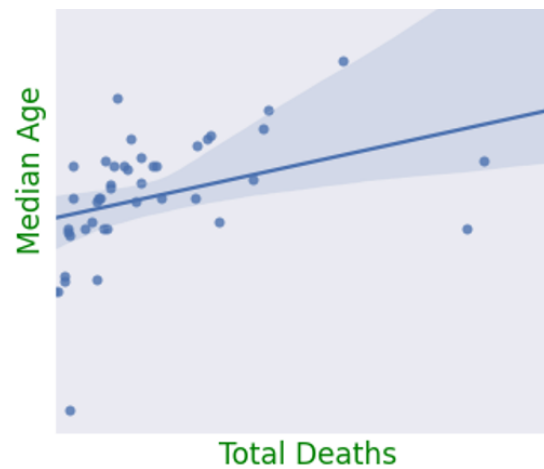
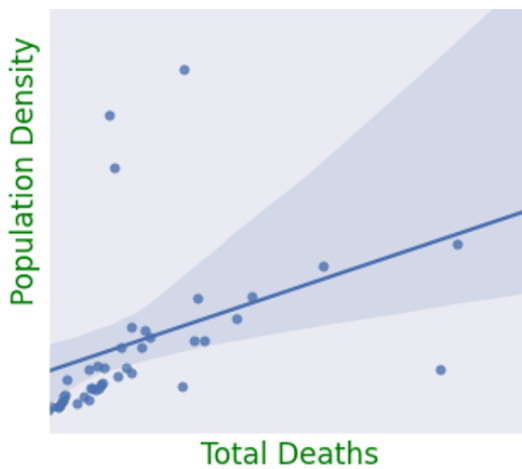


Demographic Factors

USA

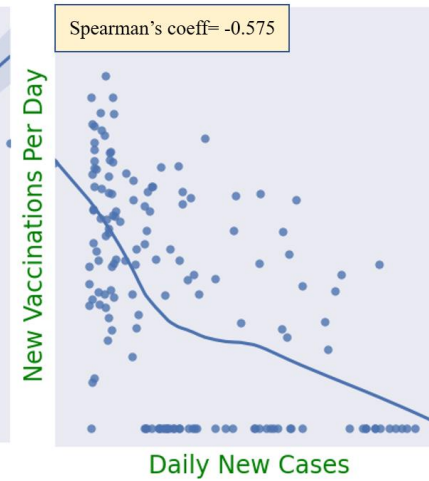
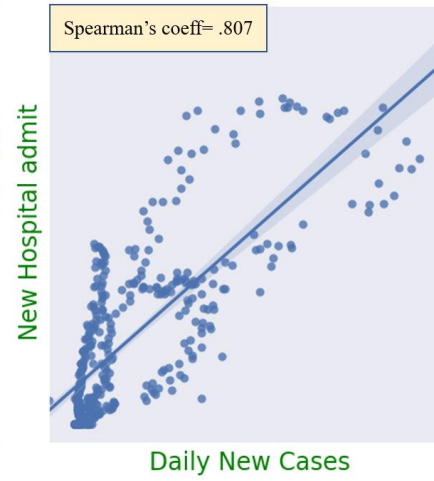
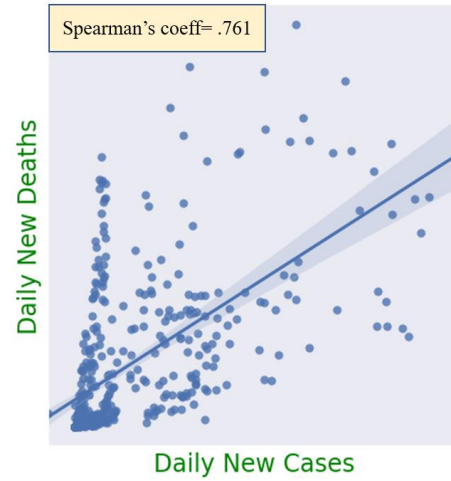


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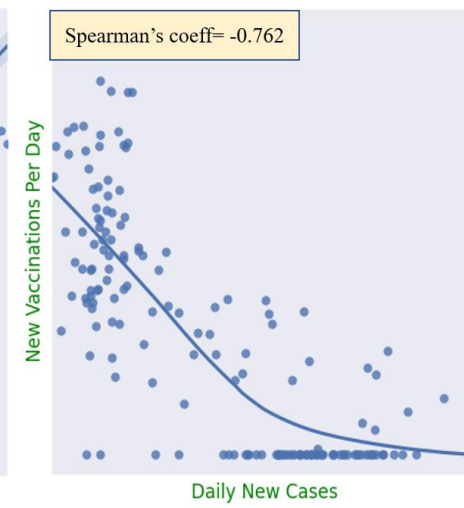
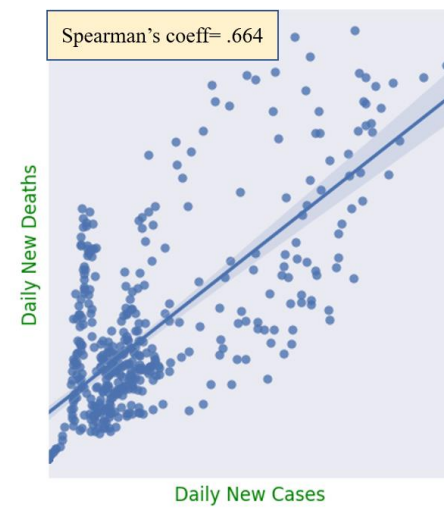


Most Related Factors

USA

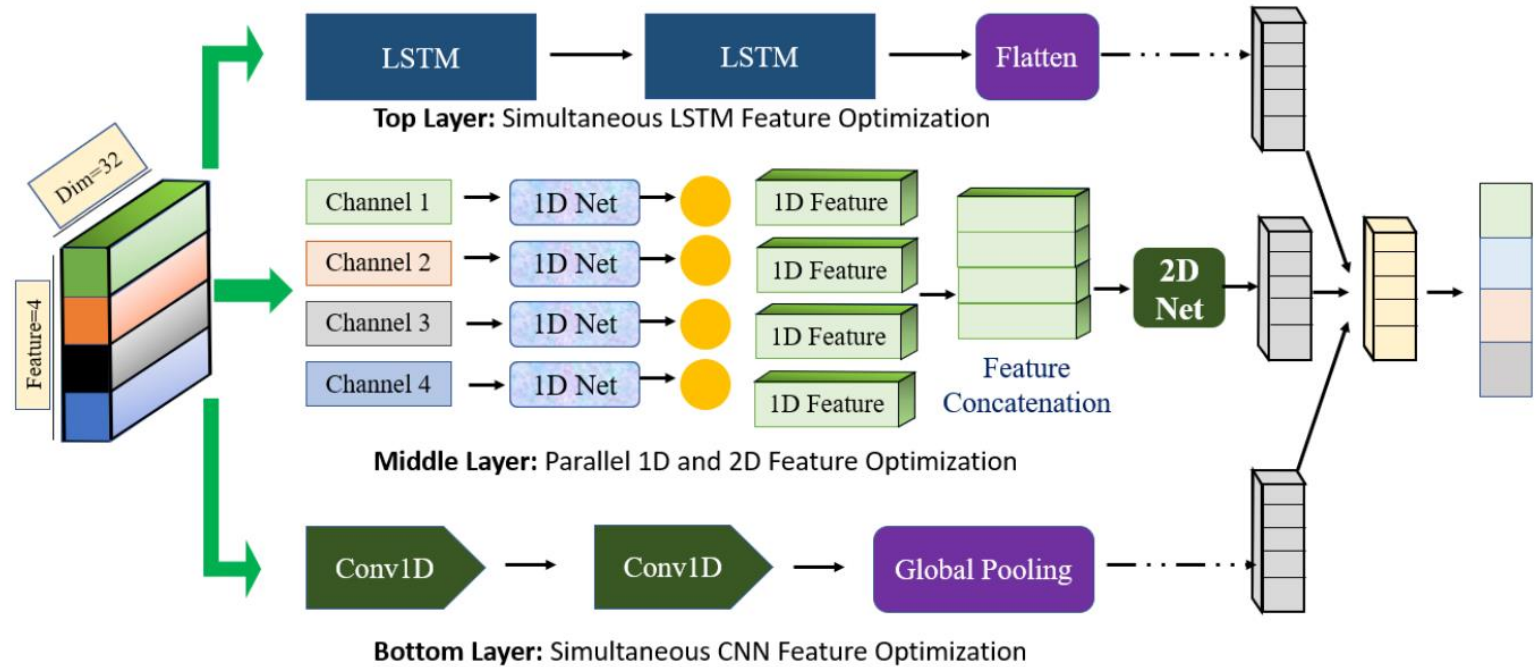


UK

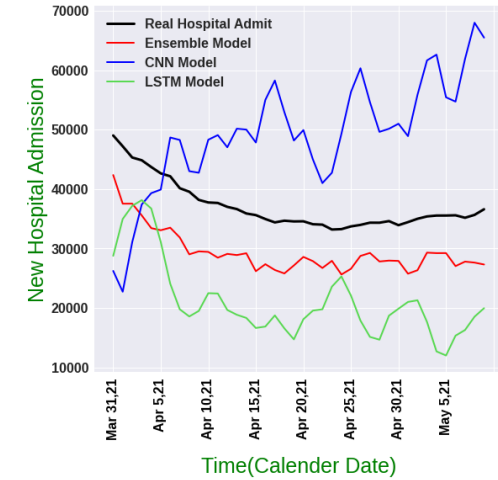
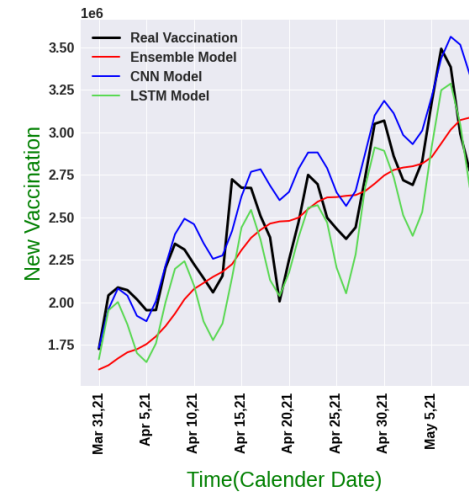
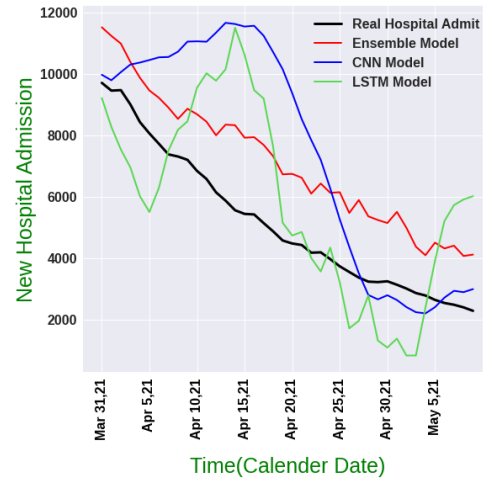
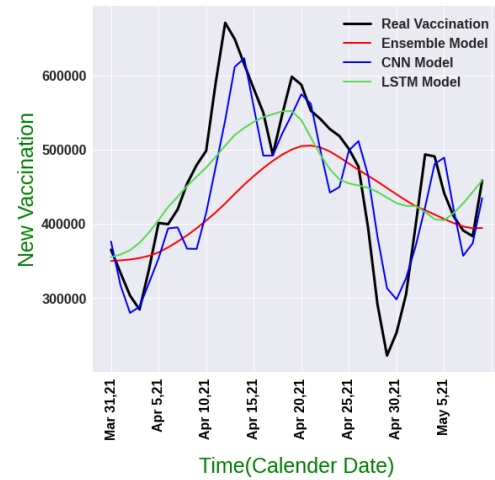
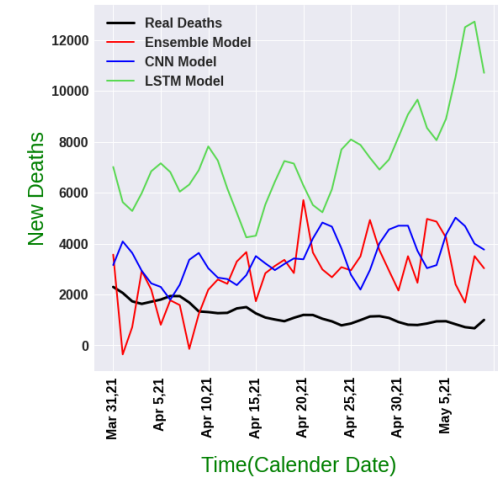
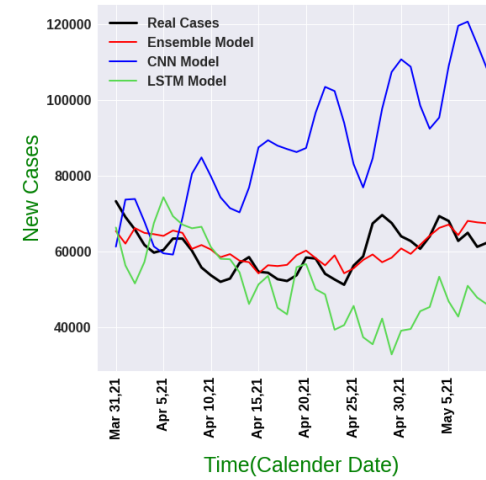
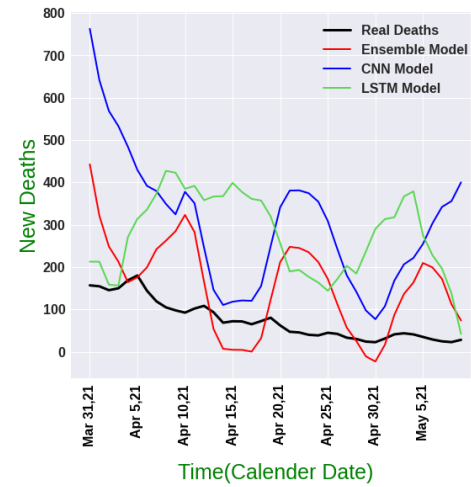
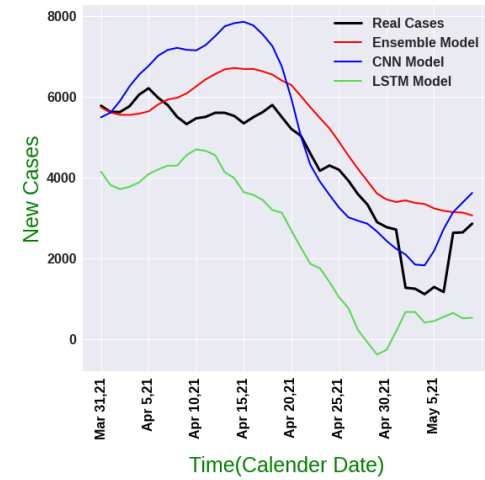


We consider major factors that have the highest correlation with new cases:

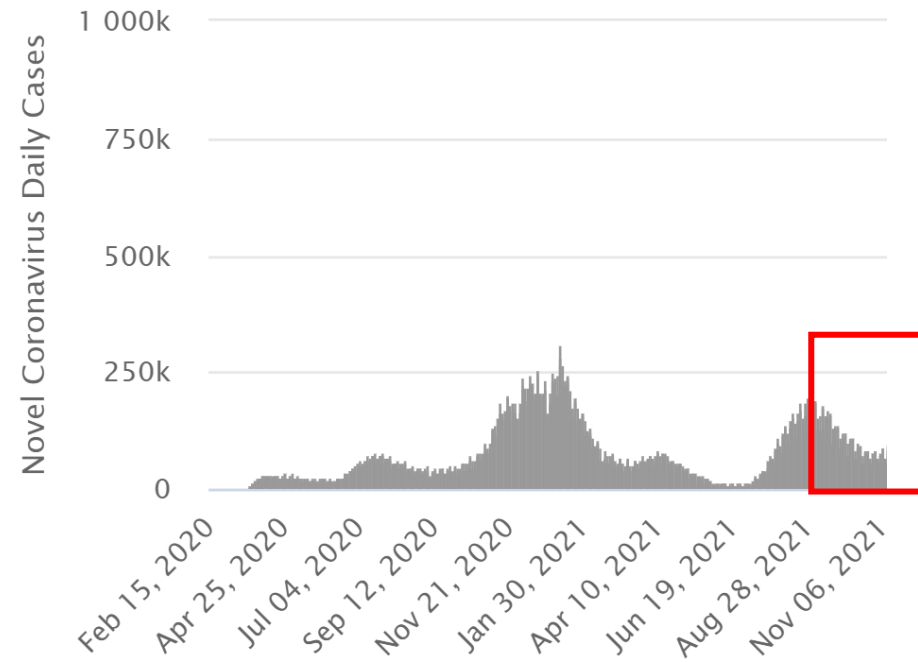
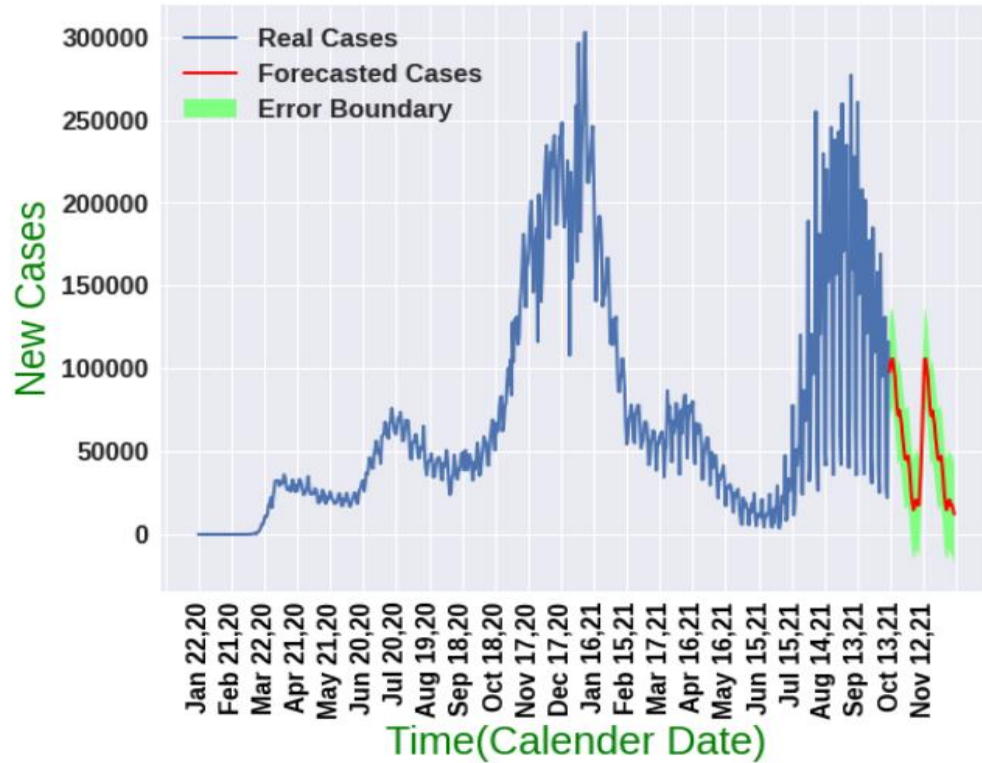
1. The number of new cases
2. Daily deaths
3. New hospital admission
4. Daily Vaccination



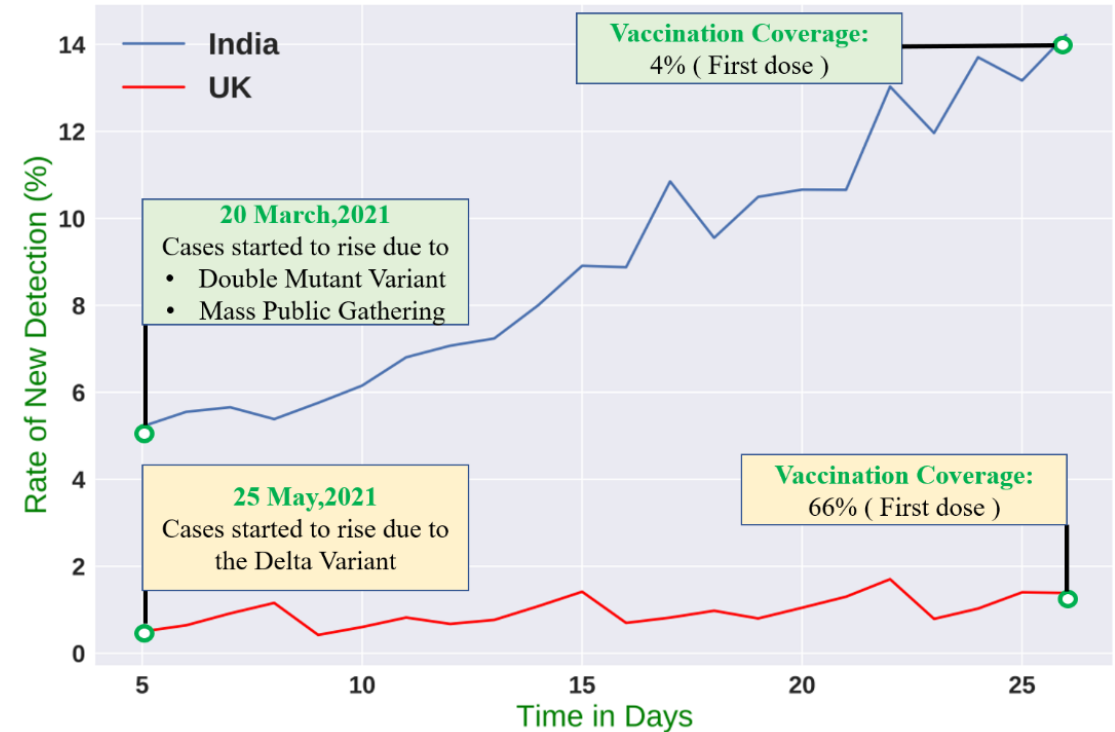
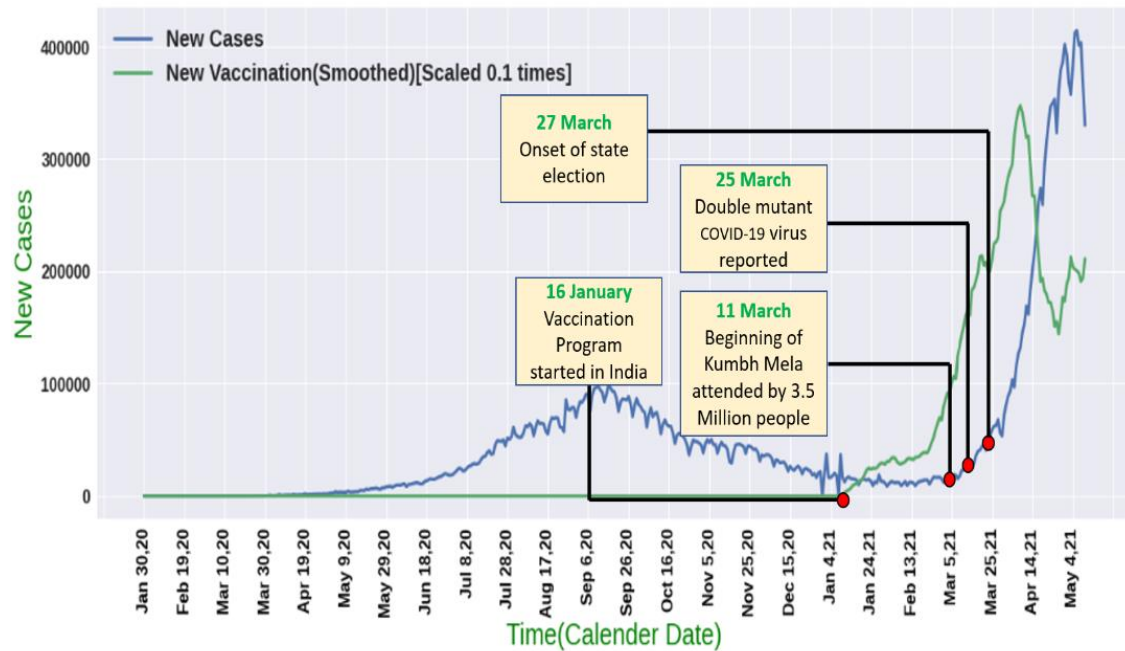
Validation Results



Forecasting Results for USA



Impact of Vaccination and Policy?



Thank You