Ilyass Sfar

CSC 405

Task III Report

The main objective of part three of the project was to make linear and non linear model plots of cases and deaths for states and counties, get the root square mean error of those models and plots, and make predictions for cases and deaths using that data. The state that was looked at was Texas, the cases and deaths were plotted on a linear model, along with the root square mean error, and a prediction, which were all plotted. When plotted a very notable upward trend was seen in both cases and deaths, the trend line also was upwards. This process was repeated but instead of the entire state of Texas, the top five counties in Texas were looked at, the most at risk countries were deemed the highest population counties, since there is more potential for new cases, and more potential for spreading more quickly, so the most populous counties were selected. After plotting the cases and deaths for all five counties along with a trend line a upward tend was seen in the scatter plot and the trend line, but unlike the whole state, the trend line was more parallel to the xaxis, it wasn't as steep. For the prediction of the entire state and the five counties, the predictions were all upwards, both in cases and deaths.

Then the next part was looking at hospital bed data to determine a point of no return, the point of no return was seen at around day 30 in Texas. This was then taken and a hypothesis was made from my original set of data in stage 1 of the project, where my hypothesis was less beds and other hosp[ital resources lead to higher cases and deaths, the hypothesis was shown to be true from the data.