**Member Task**

Viveka Erram:

Here in this task, I used the regression models to see how the data points of new cases and new deaths from the start day are fitted across Florida state and its counties.

Linear Regression Model:

This is one of the most basic regression models in Machine learning, Here I’m using this model to compare the cases and deaths in FL State with five other counties. The main goal of this regression model is to plot the best fit line for the data.

At first, I have calculated the number of “days “since first case/death in Florida state, then plotted linear regression line for the FL state cases and deaths vs number of days since first case/death (here the x-axis has the number of days since first case/deaths and y-axis with the cases/deaths in Florida state)

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Polynomial Regression (Non-Linear Regression):

The polynomial regression can provide good approximations between the target variable and the independent variables.

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An error metrics is used for evaluating the performance of a regression models. RMSE (Root-Mean Square Error) is one of those metrics.

So here, For calculating RMSE I have imported mean\_squared\_error from the sklearn.metrics.

RMSE of Florida state cases is 3007.749701096412

RMSE of Florida state deaths is 57.67351769623458

Sorting TOP 5 counties with the highest case rates and creating regression models for them:

1.) Miami-Dade County  
2.) Broward County  
3.) Palm Beach County  
4.) Hillsborough and  
5.) Orange!

**Miami-Dade County:**

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**Broward County:**

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**Palm Beach County:**

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**Hillsborough County:**

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**Orange County:**

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