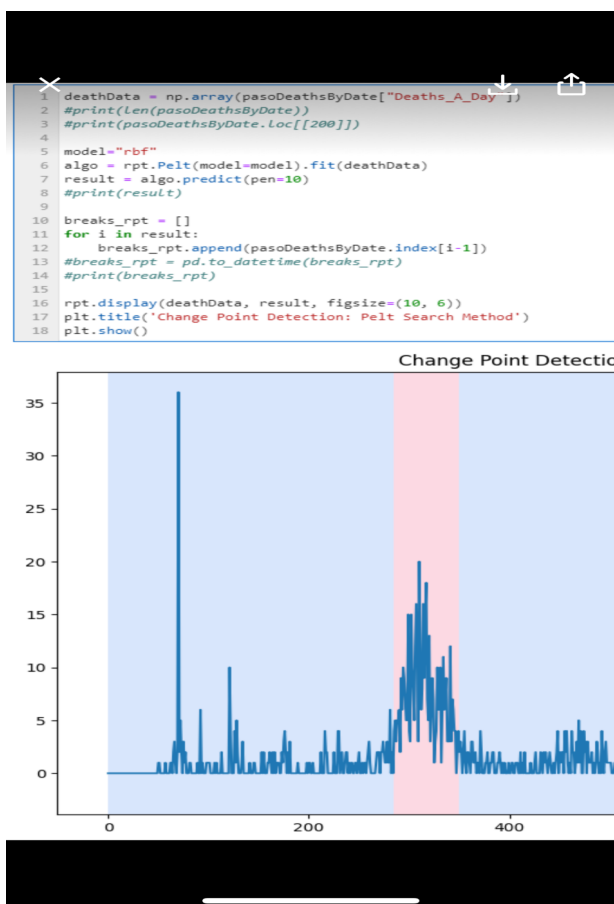


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Project Part 1

Reflection

Through reading the discord server of MSDS students, there were some useful approaches that other students took in identifying changepoints. Before I had never heard of using the Pelt changepoint method, however it was a perfect application for this use case. I needed a mathematical way to determine where the time series data was of interest, so that I could narrow down the search of policy changes and see if there were any changes related to masking policy that might have impacted the time series.

My first thoughts were to take the derivative of the function again and then use a search to find the local minima and maxima. This would have only resulted in single points though when I needed more than that. I then decided to look at the MSDS forum to see what other students had done to check if there were any viable solutions to this problem. Eli had posted his code solution to the problem with the library he had used:



This method was exactly what I needed to continue analysis and without it I would have gone with an inferior method of determining times of interest. Afterwards there was a bit of reading up that I had to do on the method [here](#). The results were far different than what I would

have gotten from using derivatives. I also combined derivative information however as I thought that it would be a good anecdote to the results from this method in determining single points of interest.