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Data 512
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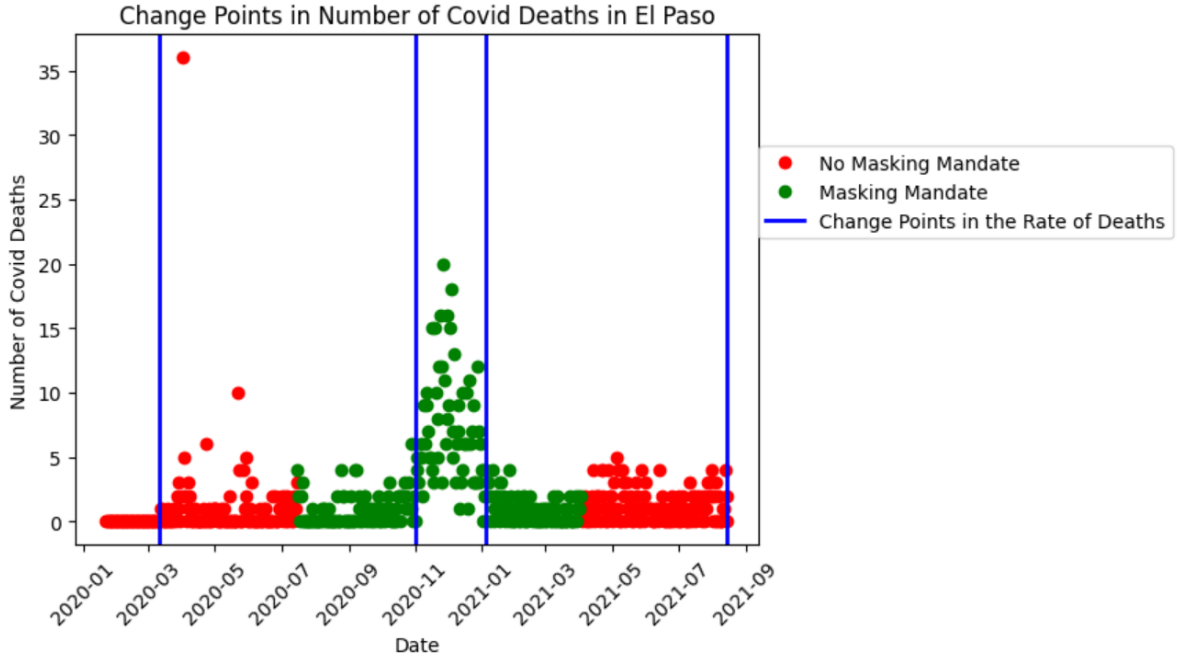
Part 1: Visualization Explanation



The visualization I came up with is a relatively simple one. It displays the number of Covid deaths in El Paso county in Colorado divided into two groups, days when there was a masking mandate and days that were not. Next I plot the number of significant change points in the rate of Covid deaths. The y-axis is the number of covid deaths, the x-axis is the date, an individual point is the number of deaths on that day with green points being days with masking mandates and red points the days without them. Lastly, the blue lines are the days that had a significant change in the rate of covid deaths.

The data for this graph comes from two major locations: The John Hopkins University COVID-19 data for the number of deaths in El Paso, and the CDC for masking mandates by county. I joined the data on the dates, and used it from there. The method I used for finding the change points is the Pelt method since it is quick and exact.

The way I read the change points is that the area between lines has a similar rate of covid deaths, i.e. between approximately January of 2020 and March of 2020 there is a similar rate of Covid deaths, and between March of 2020 and November of 2020 is a similar rate of Covid deaths. Some of these values make sense (there are no reported Covid deaths in El Paso before March of 2020), but others are more surprising. The closest changepoint to a change in masking mandates is four months, long outside when it should have made an impact.