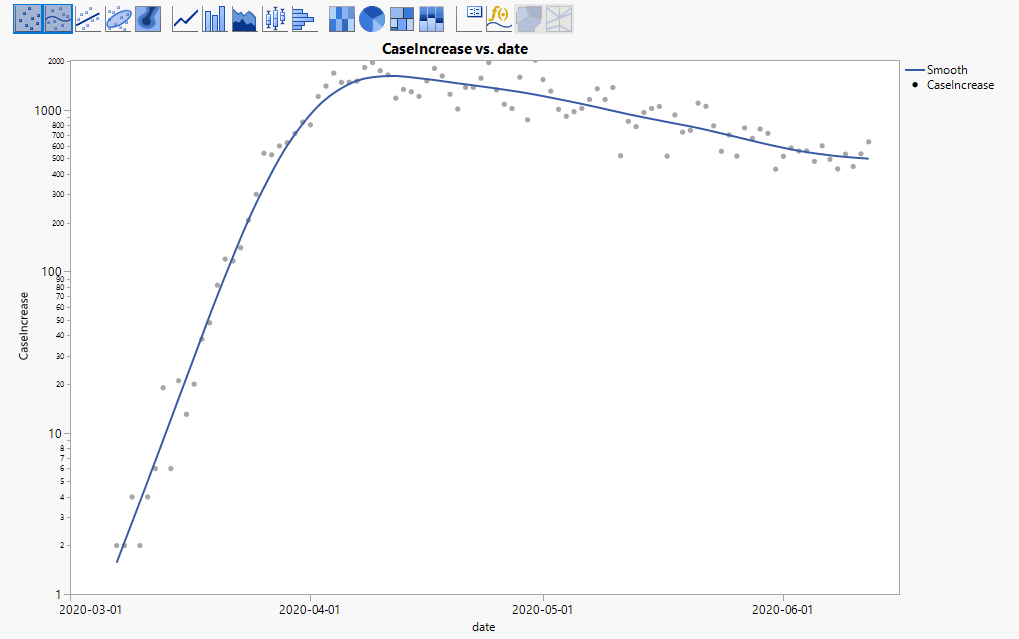
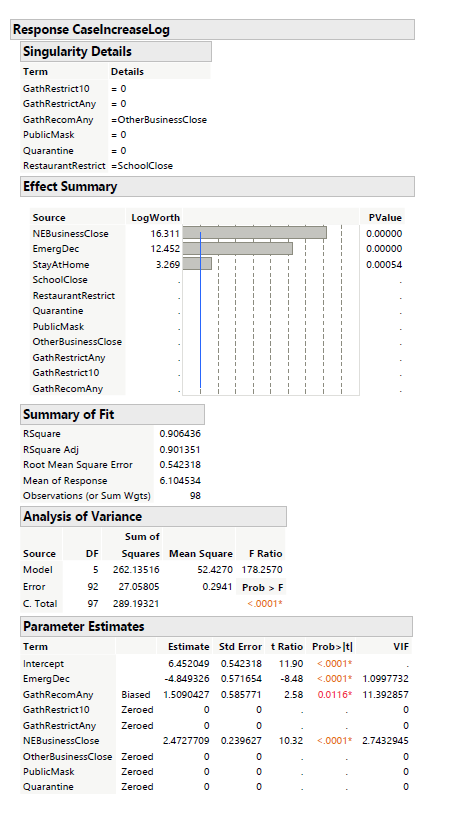
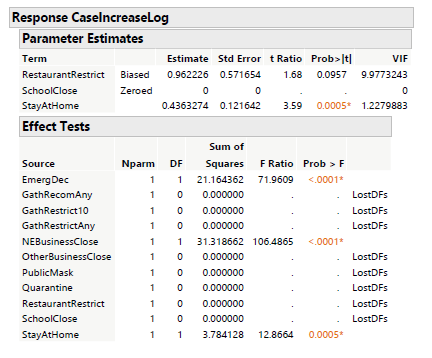
Initial Scatter plot of Log(CaseIncrease) vs Date



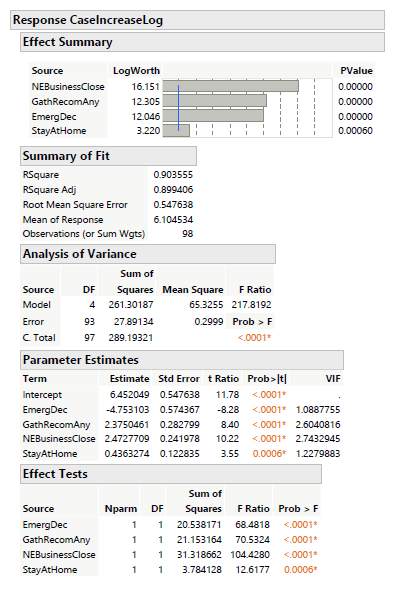
First regression run.





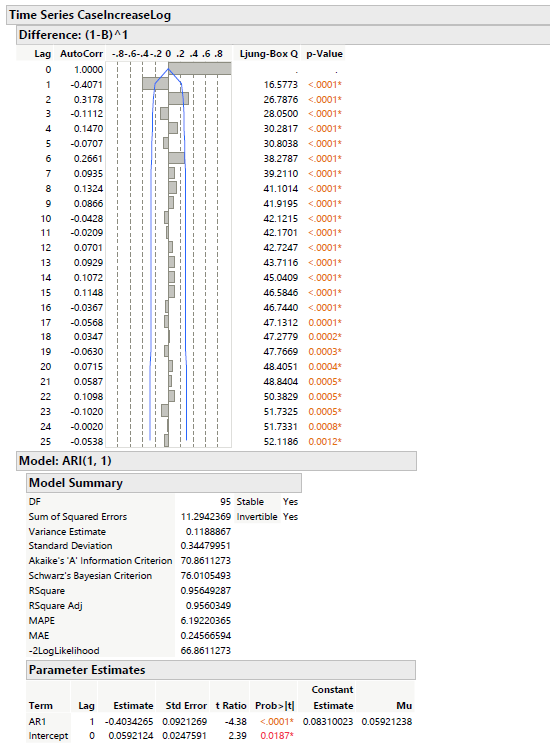
First regression run. Revealing features that were zeroed out, biased, insignificant, and correlated with eachother.

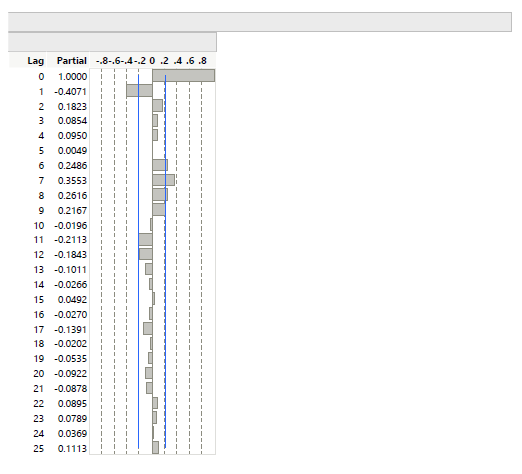
Final regression model

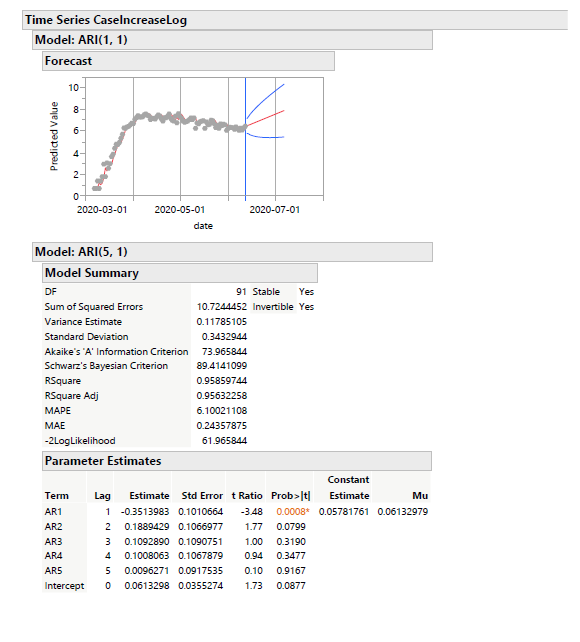


After running multiple regressions and eliminating features, this is the final regression model we came up with. Finding that EmergDec (Emergency Declaration), GathRecomAny (Gathering Recommendation Any Amount of People), NEBusinessClose (Non-Essential Business Close), and StayAtHome.

Time series.







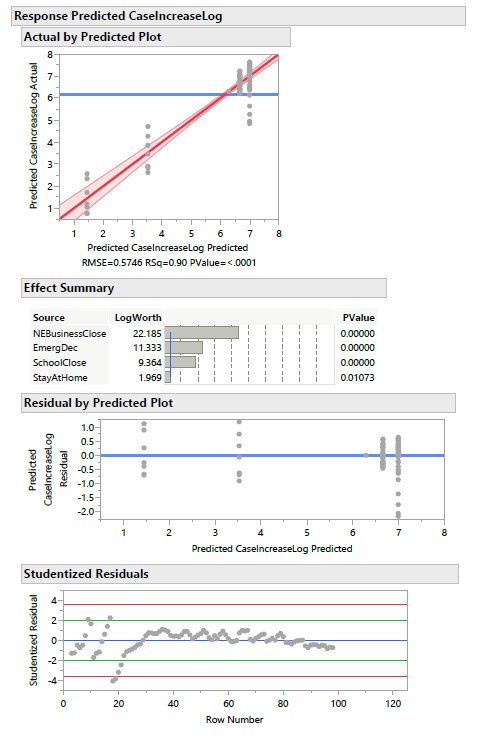
Running time series.

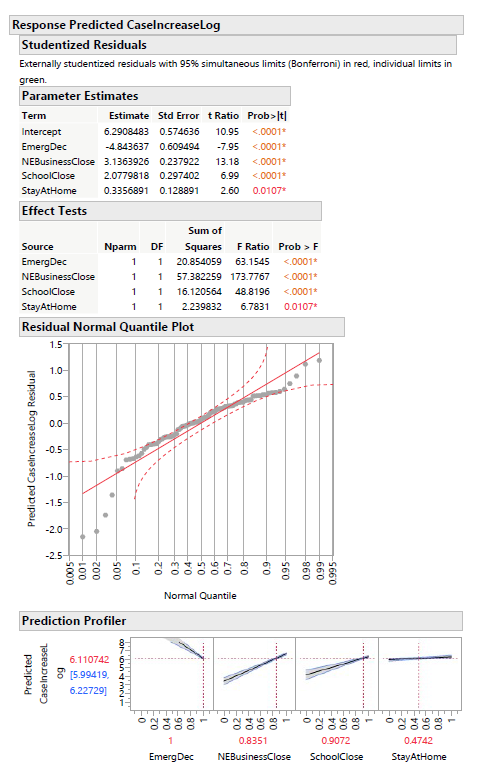
Arima

Nonseasonal differencing order: 1

Differencing order: 1

Autoregression: 1





Final Arima Result. In the final Arima result we found that EmergDec, NEBusinessClose, SchoolClose, and StayAtHome policies impacted Pennsylvania’s case count the most.