**factors affecting covid-19 in South Korea and forecast how covid-19 spread in South Korea in future**

**Introduction**

Covid-19 has affected the world a lot. In this project, we will first discuss how covid-19 affect South Korea and then we will apply different statistical learning methods to forecast how covid-19 spread in the future.

**Factor analysis  
*Relationship between different factors and confirmed case***

Apart from the autocorrelation from the dataset, it would be much interesting to talk about other factors that will affect the confirmed cases.

*For all figures, please refer to appendix. Press Ctrl + right click will direct you to the location.*

[***Figure 1.1***](#f1) shows the correlation between the keywords search in Korea’s most popular search engine, government policy and confirmed case.

*Surprisingly, the correlation between government policy and confirmed is less 0.1, which shows that there is almost no relationship of what government has done and the number of confirmed cases.* [**Figure 1.2**](#f2) *shows the date government applied their policy and the confirmed case. However, there is actually a weak correlation between confirmed case and people searching keyword for covid-19, the correlation is 0.35.* [**Figure 1.3**](#f3) *shows the relationship between people searching coronavirus and confirmed case, we can see the trend of people searching for keyword coronavirus and confirmed case are pretty similar.*

***Relationship between age group, gender, confirmed case and death case***

It is also interesting to condition on age group to see whether it affect the confirmed cases and mortality rate.

Appendix

[**Relationship between different factors and confirmed case**](#correlation)

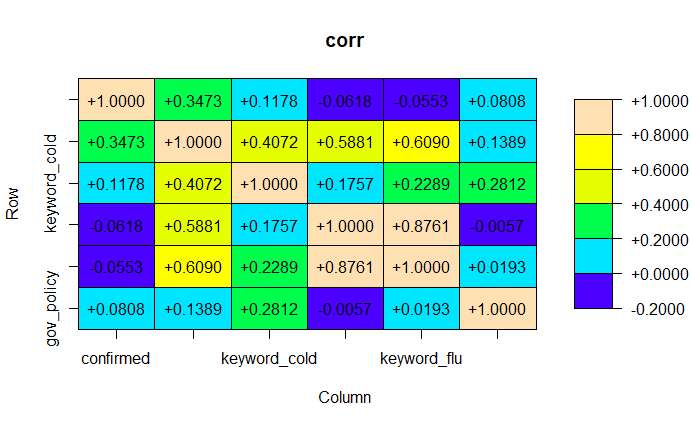
[](#relationfirmed)

Figure .1

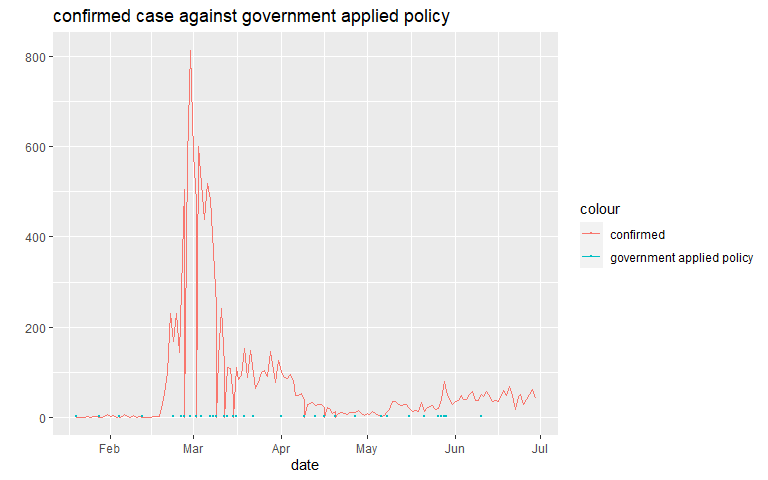
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Figure 1.

[**Relationship between different factors and confirmed case**](#correlation)

