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Actuaries and Data Science during COVID-19

In light of COVID-19, people have had to adapt their lifestyles to ensure the safety of people and reduce the spread of COVID-19. These restrictions, however do not come from nowhere. Actuaries and data scientists analyze the data coming from those effected by COVID-19 in order to try and model certain important aspects of daily life. Some aspects include hospital beds which could be at a premium in highly susceptible areas. In order to inform as many people as possible, actuaries may want to explain very complex models so more people can understand what certain models are predicting.

With COVID-19 being so prevalent in daily life, there is a great deal of data which actuaries and data scientists can use. Using data, actuaries can model certain aspects of COVID-19 related consequences such as hospital bed utilization and virus infection rate. By building these models, actuaries can extrapolate and try to predict what is coming in the near future. One such model could help with the utilization of beds in hospitals and the virus infection rates of COVID-19[1]. Modeling hospital bed utilization will help hospitals use their beds much more efficiently which will decrease congestion in hospitals and allow for more people who need care to get what they need. Modeling virus infection rates will also show how susceptible people are to the virus and how likely it is for the virus to spread in densely populated areas. This kind of statistical analysis can help give advice to the general population in order to control the spread and overall consequences COVID-19 has on the world.

Actuaries are also very versed in communicating. Their job usually requires them to explain what they have done in layman's terms. This ability to translate complex models and put them in a way that anyone can understand is crucial to spreading the knowledge about COVID-19. Actuaries can also give insight into models and compare those models to other

models[1]. Since there are many ways of looking at and analyzing data, it is always good to compare models to see what other people have done. Some models will make different assumptions which could result in drastically different looking models. Some models may even be made to misguide instead of inform, so actuaries could call these models out as false.

COVID-19 has brought on a mandatory surge of data science and actuarial work. With massive amounts of data to use, there are many ways one could interpret that data. By using COVID-19 data, actuaries can effectively model hospital bed utilization to prevent hospitals from gettting flooded. However, these models are also very complex and might not be very intuitive. Thus, it is also important for actuaries to communicate about their models as well as others.

References

[1] Eaton, Robert. 2020. Actuaries in the Time of Coronavirus. https://theactuarymagazine.org/actuaries-in-the-time-of-coronavirus/. Accessed 23 November 2020.