Since its initial appearance in Wuhan, China in December 2019, the novel coronavirus (COVID-19) has been formally declared a Public Health Emergency of International Concern (PHEIC) by the [World Health Organization](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen). This declaration calls for a coordinated international response and immediate action across the globe.

In these unprecedented times, adjustments to health care and resource allocation need to be made efficiently and effectively. As the number of COVID-19 cases continues to rise, government officials, community leaders, developers, etc. are forced to make decisions that impact the lives of countless people as well as the progression of the pandemic.

On March 23rd, Major John Tory announced a municipal emergency for the city of Toronto which stresses the need for even more drastic measures to prevent this disease from spreading further. According to the [Centers for Disease Control and Prevention](https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/high-risk-complications.html), the outcome of contracting the virus can be more severe for older people and those with pre-existing health conditions such as asthma or auto-immune disorders. Therefore, it is absolutely necessary to consider at-risk populations during this time.

Our app, Toronto COVID-19 Susceptibility Assessment (TCSA), utilizes relevant economic, demographic and health data in order to evaluate which areas of the city are more susceptible to the spread of COVID-19. By using TCSA, one can identify neighbourhoods in Toronto that are in greater need of specific health services as well as those at greater risk to succumb to the virus by looking at layers of data weighted by importance. Ultimately, it is our hope that TCSA will provide the means for community leaders, government officials, developers and any decision-makers to make well-informed decisions throughout the COVID-19 pandemic. Examples include decisions regarding resource allocation within the city, possible drive-thru testing locations, new COVID-19 assessment centres, etc.