Eric Chen: Good morning everyone, my name is Eric Chen

Kevin Wang: I’m Kevin Wang

Kevin Zhu: And I’m Kevin Zhu

Eric: In this presentation, we are going to answer the following three different questions. So, now we will begin with the first question.

Kevin Wang: Here is the date for the lockdown stage1, we will discuss how different provinces act differently in this period. First of all, let’s take a look at the park. As shown in the graph, the mobility in each province was higher than the baseline, especially in Nova Scotia. This results in that all the provinces opened their parks in stage 1 because the larger area had a low risk of infection. Here is the data for a residential area. The higher value means that more people stay in their house for lockdown. As you can see, Ontario had the greatest amount, showing the restrictions for residents were still a lot. Nonetheless, B.C only increased 10.90% compared to baseline. So, my team hypothesized that it didn’t have many mandatory restrictions. And after the research, it proved that we were correct. Now move to retail and recreation, from the graph, all provinces had low mobility, which shows that the retail and recreation were remaining closed or only allowed for car side pickup. One interesting thing, the mobility for Manitoba only decreased 15.13%, while Ontario decreased 29.48%. This is due to the different policies, Manitoba opened most retail under some restrictions, while Ontario recommended the public to pick up instead of in-person shopping. Not only retail and recreation, but the mobility in workplaces also decreased, proving people worked at home and had less traveling in stage 1.

Kevin Zhu: Now, we will discuss stage 2. In most provinces, stage 2 began in June, only a few  decided to start in mid-May. Take a look at the residential area, you will see that the mobilities were all decreased in a range from 3.85% to 6.75%. This means that more and more people leave their home to work or hang out. Move to park, as you can see, the mobility was increased and some almost doubled than the baseline, especially in Nova Scotia. The possible reasons might be weather was getting warmer and the restrictions for the park were almost canceled. For retail and recreation, the mobility increased in a range from 15.65% to 21.91% in each state, Manitoba even had a greater than the baseline. On the other hand, as more mobility opens, retail and recreation should have more mobility as well, which shows that the policy allowed some workplaces to open. This would directly result in more people going back to work.

Eric Chen: After June, Canada ended up in stage 2 and moved into stage 3. Compared to stage 1 and 2, stage 3 had the greatest mobility in total. For example, based on the graph we can see that the restriction for parks was the least or even no restriction. Otherwise, the mobility wouldn’t have more than double the baseline. At the same time, there were more and more people in retail and recreation, which are shown in the graph,. However, the workplace was quite different than our expectations. My team considered that the government should extend the restrictions to let more people back to work, but the mobility actually decreased. We guess that the government found out some issues with in-person working, so released more restrictions for the workplace. In addition, the mobility in residential areas gradually decreased toward the baseline. This is due to the number of new cases in Canada, if you take a look at the trend line on the right, stage 3 had the least number of new cases, so people were more comfortable going out. Therefore, if the cases get lower and lower, the restrictions for the resident will be less.

Kevin Wang: So now, lets us take a look at question 2. For this question, we compare the mobility of Canada to the other three countries, which are the U.S., South Korea, and Brazil. Before we compare their mobility, please take a look at the number of new cases per month in each country. Compared to Brazil and America, Canada and South Korea had the lowest new confirmed cases. Based on this, we can see that Brazil and the United States had a low recovery rate, while the recovery rate in Canada and South Korea was higher than the other 2 countries. Based on this information we can compare the mobility of different countries in different areas. First, if we compare the mobility in grocery and pharmacy, we’ll see that Brazil had the greatest mobility while Canada had the least. The reason behind it is that lots of people in Brazil refused to lockdown, so there was no actual lockdown compared to other countries. At the same time, the mobility of grocery and pharmacy in South Korea was also fairly good, 6.05% above the baseline. Now take a look at parks. It was quite different from the mobility in the grocery and pharmacy. Canada had the greatest value of mobility, while Brazil had the lowest, which was the opposite to the last area. Not only that, but Korea also had high mobility compared to America and Brazil, similar to the mobility of grocery and pharmacy.

Kevin Zhu: Next, take a look at the mobility in retail and recreation. The mobility of retail and recreation in the US only decreased 10.74%, while Brazil decreased 23.88%. This might be due to that American only stay at home for the first three months of the pandemic, then they refuse to continue to do that, thus resulting in the high mobility and high number of new cases as well. On the other hand, for residential areas, the mobility of residence in all 4 countries increased in a range from 4.91% to 9.03%. Although Brazil had the greatest value of mobility, it means that people spent more time at home. Nonetheless, the mobility in South Korea was only half compared to the mobility in Brazil, which shows that South Korea actually did a great job, otherwise the people would still stay at home. The mobility in residential areas would be fairly high.

Eric Chen: This statement is also proved in the mobility of the workplace. Korean have the greatest mobility in transit stations and the second largest mobility in the workplace. This shows that lots of Korean returned to work earlier compared to other three counties. The reason behind it is that South Korea told people to stay at home and treat the virus seriously at the first place, so the number of new cases were getting lower and lower when other countries were worried about their increasing number of cases, Korean could still back to work and enjoy their lives even under the pandemic. There, as shown in the graph, we think Brazil had high mobility but low recovery. South Korea had a high mobility and recovery rate. On the other hand, America and Canada had low mobility. However, the recovery rates were high in Canada but low in the US. Canada should react quickly in the first quarter of 2020 and extend the stay-at-home act infinitely until the number of new cases becomes 0.

Kevin Wang: Now, let’s move to question 3. In question 3, we will focus on the public’s interest during 2020. Here is the rank of the number of searches from Google Trend. As you can see in this rank, coronavirus had the greatest amount of search worldwide, while election results were under it. Based on this list, we decided to talk about the public interests of the Google Classroom, as well as for the Uber Eats.

Kevin Zhu: Let’s first talk about Google Classroom. Due to the increasing cases of covid-19, Canada decided to close the school and move to online learning, Therefore, the use of google classrooms should at least increased in the first half-year. In this graph, the higher value it has, the greater popularity of this term, meaning more people search for this term. If it reaches 100, then this term is at the peak of popularity. As shown in the graph, the term Google Classroom reached 88 in popularity in Canada, so there would be lots of people searching for this term. However, as the time moved to July and August, people didn’t search for Google Classroom anymore, This is because the mobility in this period was super high, and students were also having a summer break. Nonetheless, the popularity started increasing again after September, as well as the mobility decreased. In addition, from the map, Google Classroom was searched the most in Ontario and Alberta, because their mobilities in the residential area were higher than in the other provinces and people were all staying at home. Therefore, we know that as residential mobility increases, the popularity in search of Google Classroom will decrease.

Kevin Wang: On the other hand, the popularity of Uber Eats also increases. Similar to the popularity of Google Classroom, more people search the term “Uber Eats'' when the lockdown and quarantine act started. People wanted to try some new food, or they couldn’t go out and buy food for basic needs, so they will search Uber Eats in order to get some food. Then gradually, the popularity of Uber Eats increased and reached 94, which shows that almost everyone in Canada had searched this term. Not only that, but if you compare it to other provinces, you will also see that the popularity to search for Uber Eats in Ontario reached a peak. At the same time, Ontario had high residential mobility as we mentioned before, so it makes sense that the people in Ontario would search for Uber Eats. All in all, the popularity in search of Uber Eats will increase when mobility decreases.

All: This is the end of our presentation, we answer all three questions. Here is our work cited. Thanks for watching.