Abstract

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In the past 2 years people have had to readjust their lives to meet the standards imposed by Health Centers such as the CDC in a fight against the spread of COVID19. For the Data Challenge 2021, our team decided to work with the NCSG behavior changes during COVID19 provided by the UMD National Center for Smart Growth. The UMD national Center for Smart Growth conducted a survey to study the impact of the pandemic on people's commute habits and daily exercising activities. We further studied the responses provided by the participants in the survey to comprehend the change in their behavior.

Our team dissected the sample population by age groups and further divided them by demographic feature: Zip code, Married and Sex. With this approach, we filtered the dataset and narrowed it down to significant variables relevant to our investigation. We then generated hypotheses to have a basis of correlation between variables. We aimed to understand the behaviors of our participants and predict their patterns.

Through our analysis of the behaviors of our participants, we focused primarily on studying the implications of our participants' outing purposes, shopping habits, physical activity, and commutes. Our goal was to provide recommendations to enhance the quality of living during the pandemic by analyzing the behaviors of our participants thus far. We created four hypotheses:

1. Participants, above the age of 60, increased online shopping during the lockdown compared to those ages 40 and under.
2. There was no significant change in online shopping habits among participants ages 40 and below.
3. There was an increase of 10% in physical activity due the COVID pandemic.
4. Participants ages 50+ experienced reduced commutes by 10% as a result of the pandemic.

We employed the use of various analysis tools to best draw conclusions from our dataset. We used R for data cleaning, analysis, and visualization creation. We used SAS Studio for table creation.