**Project Abstract**

Our team used the level 3 dataset, *Data\_Lv3\_UMDOTS\_Escooters.csv*, to extract the insights from the data about the eScooter rides on/off the campus. The original dataset contained 6 variables and 40,325 units of observations, with each observation representing a single eScooter trip.

We focused on two main objectives for this project. First, we intended to learn the impacts of the pandemic on the use of the scooters. We compared the scooter usage situations between October 2019 and October 2020 focusing mainly on two aspects: the distance traveled by the scooters as well as the duration of the ride. Our second objective is to explore the most popular starting and end locations of the scooters. We used the coordinate data to answer this question. We hope these insights could help the scooter users and campus managers to utilize scooters more easily in the future.

The primary programming tool we used was R, however, we also utilized Excel. To compare the distances and durations of scooter rides between two time periods, we first subset the data into rides that happened during October 2019 and during October 2020. Then, we obtained statistics summaries, box plots, and t-tests for the distances and durations respectively. To locate the most popular starting and ending points, we ran the coordinate data through a software called QGIS, which is a geographic information system application. By generating heat maps, we were able to identify the most popular locations.

After conducting our analysis, we found that the distances traveled during October 2019 and October 2020 are different. While the average distance of rides in October 2020 is greater, the distances in this period also show a larger spread than the distances in October 2019. Unlike the distance, the durations of scooter rides are not significantly different between these two periods. It suggests that people in pandemic are likely to travel longer distances by scooter, even though people do not spend significantly more time on the rides. Lastly, the most popular locations include Eppley Recreation Center, UMD Department of Transportation services, The Varsity Apartments, Cypress Building (close to The View), Susquehanna hall (close to south commons), Francis Scott Key Hall, and Target.