

Summary

VEO e-scooters have made traveling across campus convenient, enhanced student life and have sustainable goals of reducing fossil fuel consumption. They have also reduced students' loads of walking across campus, or worse, waiting for university shuttles. But these come along with safety concerns as students ride on the sidewalks posing high risk to the walking pedestrians. Our goal is to reduce the number of infractions by imposing rules on riding on sidewalks and come up with safety measures for both the pedestrians as well as the riders. The VEO riding dataset for the months of September and November has been provided along with the sidewalk database as well. We combined these layers on ArcGIS Online to visualize the most frequented rides that have occurred on sidewalks. We observed that there is a massive drop in rides in the month of November, which could be attributed to external factors like dropping of temperature or high wind speed or reopening of campus in September which significantly increased the volume of rides. Next, we compared the regions around which most infractions occurred. We focus our observations on the regions present in campus, because they are more likely to be dangerous as there are a lot more people on the campus than outside. On comparing the two sets of data, we observed a couple of common regions which had one of the highest infringements. These could be because of the Presence of Important Landmarks (Eg. Capital One Stadium), Narrow Roads due to Construction Work (Eg. Regents Dr) or absence of Bike Racks around Bus stops. Looking into all these observations, we thought about a few steps that can be taken to improve the concerned issue. First and foremost being to geofence the sidewalks and making them no-ride zones. This would ensure complete safety of the pedestrians walking on the sidewalks. Next, to ensure the safety of the rider, we should make dedicated scooter/bike lanes wherever the width of the road is above 14 ft. We also propose lowering of scooter speeds on highly frequented sidewalk areas through technology to make the rider feel safe while riding on the road. Also, sidewalks in the circumferential area around the bike racks should be open for riding for the convenience of parking the e-scooters. Now, for the riders still breaking rules, we would like to impose a fine system which would charge fines in the factor of number of sidewalks crossed over in a ride and the rider will not be allowed to book another ride until the fine has been paid. After careful observation and researching, we believe that taking these steps could help curb the number of infractions, ensuring the safety and security of both, the rider as well as the pedestrians.