

UMD DC21 Team 29 Project Summary

E-scooters are a novel transportation modality whose use cases and trends have not been fully mapped out. Increased e-scooter use would have a positive benefit to society as they are efficient and non-polluting, reduce congestion and require much less parking space compared to automobiles. We seek to uncover trends in the VeoRide campus pilot to inform possible infrastructure improvements and regulatory changes to maximize e-scooter utility and safety.

We were able to infer the community's driving habits using frequency distribution analysis of the aggregate and unique customers. We found that the fewest rides occurred from 2-6 AM and most rides occur in the afternoon and early evening. Most of the rides were under one mile; the most frequent length was 6 minutes. Spatial distribution and boundary analysis showed the prevalent locations of starting, ending, and on-route locations, elucidating the purpose of scooter rides and allowed a comparison to travel times compared to other modes of transportation. Scooting frequently saved 5-10 minutes compared to walking, and frequently is faster than the bus.

This research seeks to evaluate to what extent scooters conform to DOTS' vision of campus transportation. From our data analyses, we found that many riders may be using e-scooters for recreational purposes and most riders are starting from and ending on campus. Further research using fine-grained density analysis would inform where to install bike lanes and improve reliable access to e-scooters. We also believe that larger parking hubs would help address current challenges with increasing the adoption and usage of e-scooters, as scooters may be more challenging to locate off-campus