

Project: [Campus Automated Shuttle Service Deployment Initiative](#)

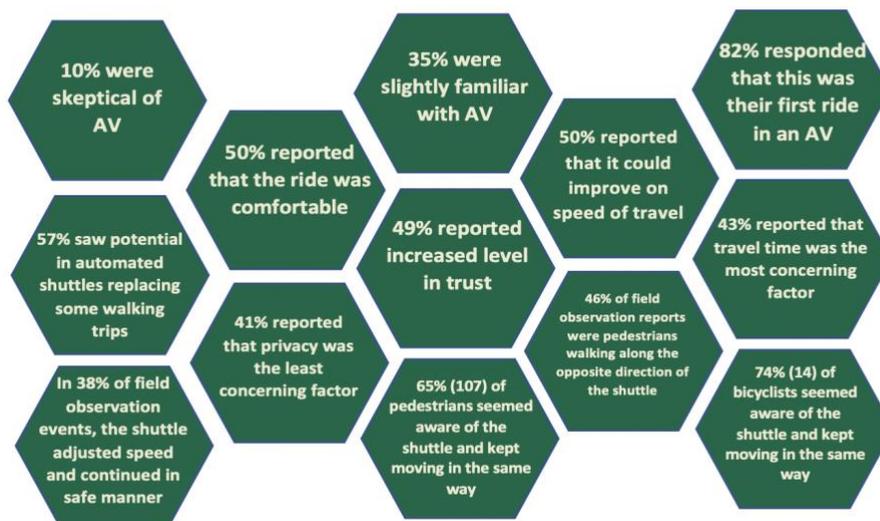
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Summary

In research of potential autonomous vehicles (AV) to serve as transit alternatives, universities can serve as unique playgrounds due to their distance challenges. Because the University of South Florida (USF) has a student population of over 50,000 with its own transit system (Bull Runner) and access to others (HART), it serves as the optimal research location for AV technologies. Although the benefits of AV include improved fuel efficiency and more productive use of travel time, there are still fears concerning equipment failure, liability issues, and public acceptance. This research aims to better understand these challenges through the assessment of attitudes towards AV shuttles and the potential to operate on university campuses.

The research team began their project by reviewing technologies and vendors through the calculation of capacity, speed, weight, etc. Ultimately, many of the vendors' rates exceeded the project's budget and therefore Coast Autonomous was chosen as the vendor. Potential campus sites were then selected and evaluated to meet the required characteristics that included being less than 2 miles in length and with minimal obstructions. The final site, Sessums Mall, connecting the USF Library to the USF Recreation Center, was chosen in an effort to ensure top safety while still having the opportunity to test the readiness of the AV to interact with pedestrians, cyclists, and skateboarders.

Figure 1- Notable Statistical Results



In modeling usage and willingness to pay, the result found that males are less likely to use automated shuttles for some/all trips. In addition, white and low-income respondents reported being less likely to use the shuttle. Those who had some level of familiarity with AVs before has a positive outlook towards using it on campus. No gender differences were found in the willingness to pay, but the study found that respondents age 45 or more reported to be more likely to pay younger counterparts. Those reporting their race as Asian were also more willing to pay. Altogether, surveys showed an overwhelmingly positive attitude towards the automated shuttle. In field observations, the AV often chose a passive action to avoid conflicts with other road users. Respondent age and ethnicity were significant predictors in determining the likelihood of using automated shuttles, with ethnicity being a significant influence also in willingness to pay.

Future studies could incorporate frameworks to better understand the nature of trip-making that is likely to be impacted. Ultimately, this study serves as an important benchmark to assess the progression of public opinion and preferences towards this technology in a rapidly evolving world.

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