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CEN3907C – Parking Availability System Pitch Revision

The Parking Availability System (PAS) was inspired by the lack of easily available parking resources on campus and would promote quicker and more reliable transportation to and from campus. The goal of this project also aligns with a pitched pilot project from 2019 by Civil and Coastal Engineering professors Dr. Lili Du and Dr. Scott Washburn at UF to develop a “Smart Parking System” on campus [1], so there is the potential for faculty stakeholders in this project as well, though the status of that pilot project has not been verified.

There are multiple comparable existing devices from various vendors used to monitor real-time parking information. Some solutions for determining parking availability include counting availability at every individual space, and then there are other, typically cheaper, solutions that count cars into and out of a parking facility. These solutions are then further split between visual and non-visual solutions. Non-visual solutions include in-ground induction loops, radar sensors, ultrasonic sensors, and magnetometer sensors. Visual solutions involve using cameras to determine parking availability. According to the pilot pitch from Dr. Du and Dr. Washburn, out of three different choices of system, two visual and one non-visual, to determine parking availability in the O’Connell parking center, all implementations would have an initial cost of $30,000 to implement outside of recurring yearly costs and labor costs. The goal of this project is to develop a relatively low-cost solution to these alternatives that will have comparable accuracy to market solutions — 99%.

It is possible to add an application to the project to make this data more accessible. Incorporating a mobile parking app for the UF campus would allow this information to be readily available to students, faculty, and staff, as well as other individuals who drive to campus who would benefit from this. This app would not need to be developed from the ground-up, as I still have access to my codebase for a previous CEN3031 project prototype focused on developing a parking app for campus. Moreover, I may be able to contact an alumnus who also developed and released a more mature parking app to see if he would allow us to incorporate real-time parking data from PAS into his app.