Analysis of the shortest walk on campus

Abstract:

This research experiment models the most efficient physical path on campus using data collected through online applications and precision measuring devices. This idea was inspired by the “Shortest Walk on Campus” campaign that student government here on campus has been working on. For this research, the data was manually collected by creating an array of nodes, that represent every intersection on the campus roads outdoor, and then pairs distances between nodes for analysis. For this research, Dijkstra's algorithm was utilized, as it was an algorithm that could be easily converted into code, and it fit the goals of this project. Moving forward, the goals for this research include gathering data and analyzing it to expand the scope of walking to indoors. Once a network of indoor values are obtained, those values can then be used to determine the driest or warmest route for inclement weather, or the route with the least amount of stairs. The ultimate goal of this is to get it into the hands of users by allowing for portability to mobile platforms for development teams in student government.