

# Team 2 Project Charter

## Problem Statement:

With the ever-growing chaos of our university, planning around the unpredictability of campus activity has never been harder. Between finding adequate parking; getting to dining halls and finding half-hour-long lines with no seating; or trying to get a quick gym session in before class only to see what seems like everyone fighting for the machines at the same time, one must plan ahead or inevitably be late to something. It's safe to say students have better things to be thinking about, which is why we propose an all-in-one crowd-sourced application to keep in check with the current campus activity and make planning easier. Our application will provide relevant information all in one place so that students don't need to have apps like Waze, Calendar, Messages, and Purdue dining all open when trying to coordinate activities, and will also provide a shared calendar feature to make planning social events with others less of a headache.

## Project Objectives:

- Utilize crowd-sourcing to track how busy popular campus locations like dining halls, study spaces, the Corec, and parking lots are.
- Include effective travel time management using GPS.
- Ability for collaborative scheduling between multiple users.
- Have incentivization for participating in crowd-sourcing through customizable icons/avatars.

## Stakeholders:

- **Users - Purdue Students:** These are the primary consumer audience and will be the main basis for feature addition.
- **Customers - Purdue University and Purdue Staff:** This group holds many of the applications used currently for campus planning, and also has information about dining and transit that hopefully can be accessed by our application.
- **Software Developers - Our DevOps team:** Lycia Melendez (Scrum Master), Quinn Conrad, Cody Schroeder, and Dylan Mahan.
- **Development Manager - Tru Trong Bui and Xiangyu Zhang:** These are our project coordinator, TA, and our CS 307 professor, respectively.
- **Project Owners:** Lycia Melendez, Quinn Conrad, Cody Schroeder, and Dylan Mahan.

## Deliverables:

- An interactive campus map with multiple locations and dynamic location additions to keep up with constant construction using the Python/HTML Folium library.
- Front-end developed using Python.
- Relational database for user data using either SQL or Firebase.
- GPS using location tracking and including campus walkways, tunnels, and possibly bus routes (Possibly using GPS location data, Google Maps API, Pathing Algorithms).
- Backend developed in C++ including a planner/calendar with collaborative scheduling abilities.
- Gamification features to provide customization of user profiles and provide an incentive for interaction with the crowd-sourced trackers.