Proposal

Fast Food Wait Times

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Submitted in partial fulfillment
Of the requirements of CSC-431
Software Engineering course project

03 February 2022

Preface

This is a proposal for the Fast Food Wait Times project for partial fulfillment of the requirements of a Software Engineering course (CSC431) project in the department of Computer Science at the University of Miami.

This proposal provides the scope and context of the project to be undertaken. It details the intended user group and the value that the system will have to them.

The intended audience of this document is the course professor and teaching assistants so that they can determine whether the project should be approved as proposed, approved with modifications, or not approved.

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1.0 Overview

1.1. Purpose, Scope and Objectives

The purpose of this project is to create a mobile application to inform users of wait times for fast food drive-thrus. This application will allow users to select a nearby fast food restaurant and view live wait times and an estimated number of vehicles in the drive thru to increase efficiency and decrease the amount of time each person must wait to get their food.

The intended audience for this application are people who show up to fast food drive-thrus and are forced to wait extended periods of time to get through the line and get their food. This application can be used in any crowded city and for any popular fast food restaurant such as Zaxby's.

The hardware required for this application is minimal on our end. The only hardware that would be required includes a smartphone for users to download and use the application. We will need to host our application on a cloud platform such as AWS. Our application will also require geo location data similar to Waze to populate live wait times. We will also notify users of wait times during their preferred hours indicating if there are longer than normal or shorter than normal wait times at their preferred fast food restaurants.

1.2. Project description

FFWT allows users to view wait times for fast food restaurants in their respective areas by using location services and self-reporting to monitor drive-thru traffic. This application will allow smartphone users to decrease their time spent waiting for fast food in both the short and long term. Users will be able to view restaurants around them using both map and list views, as well as the estimated wait times associated with each of them. Additionally, there will be the ability to update a favorite restaurants list, and to view analytics of past wait time data.

- Registration Page / Log In (using existing databases to store data)
- Notification Feature (use existing iOS and Android APIs to send notifications)
    - notifications for fast wait times or longer than average wait times
- Settings/Profile Page (use APIs to store data into existing databases)
    - dark and light mode
    - cellular data usage opt in/out
    - location usage opt in/out
    - email/password/name/username/pronouns change
    - profile preferences
        - favorite restaurants
        - distance preferences

    - track how many reports the user has made
- Map View (use APIs to display maps and write our own program to integrate our wait time algorithm)
    - to visualize wait times at nearby restaurants
- List View (use APIs to fetch nearby restaurants and use our own program to integrate our wait time algorithm)
    - to view an organized list of wait times at nearby restaurants
    - ability to see favorited restaurants
    - ability to filter and sort
- Analytics Page (Write our own programs to gather and use AWS/cloud to store data long term)
    - shows the typical wait times at restaurants and trends
- Reporting Feature (Using existing forms features and our own programs for data collection)
    - when users are in drive thrus, a pop up to ask if they want to report the number of cars in front of them
    - reward users for making a certain number of reports

The UI for this application will be completely built from the ground up by our developers and designers.