**Software Requirements**

**Specification**

**for**

**You Pick**

**Version 1.4 approved**

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**Senior Project**

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**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reasons for Change** | **Version** |
| Software Requirements | 10/01/16 | Rough Draft created | 1.0 |
| Software Requirements | 10/05/16 | Edit citations | 1.1 |
| Software Requirements | 10/08/16 | Added the UML Diagram | 1.2 |
| Software Requirements | 10/20/16 | Completed Draft | 1.3 |
| Software Requirements | 11/01/16 | Final Review Reviewed for Presentation | 1.4 |

1. Introduction

1.1 Purpose

The purpose of this software requirement is for the use of You Pick, a mobile application that directs a user to a choice between restaurants.

1.2 Document Conventions

The purpose of this software requirement is for the use of You Pick, a mobile application that directs a user to a choice between restaurants.

1.3 Intended Audience and Reading Suggestions

Readers intended for this document are Investors who want to invest in this project, developers who want to join this project to expand the software capabilities, and the IEEE computer society community to criticize the software for suggestions.

1.4 Product Scope

Our objective is to develop a mobile application that will help the user choose a destination for breakfast, lunch, or dinner with easy navigation and sophisticated user interface visually. “You Pick” is designed to using deep machine learning and real time modifications under the list of possible destinations when the user uses the mobile app either on the go or add a address of choice.

1.5 References

Berggren, N., & Eimer, M. (2016). The guidance of spatial attention during visual search for color combinations and color configurations. Journal Of Experimental Psychology: Human Perception And Performance, 42(9), 1282-1296. doi:10.1037/xhp0000225

Jalil, N. A., Yunus, R., Said, N. S., & Iqbal, M. I. (2016). Colour Effect on Physiology in a Stimulating Environment. Pertanika Journal Of Social Sciences & Humanities, 24(2), 811-824.

2. Overall Description

2.1 Product Perspective

This mobile application is a new, self-contained product that uses information attended under KSU’s computer science program. Information attended include class elective of Real Time Systems, User Interface, and Software Quality and Test Assurances.

2.2 Product Functions

The user will navigate using swipe functions on their phone. Swiping left or right will navigate the user on the selection given, swiping down will result in an automatic no, and swiping up will be compared to on another selection that is swiped up.

2.3 User Classes and Characteristics

The classes anticipating on using are Phone Interaction, Google Maps, Real Time System, Restaurant List, and Machine Learning. In an abstract model, the phone interaction class represents all the interactions that the user will perform on the mobile application, Google maps will represent the use of searching for restaurants nearby, real time system class is to update the list of possible destinations, restaurant list class is to confirm restaurants onto the list, and machine learning class is to remove any new add-on restaurants that the user will not want.

2.4 Operating Environment

The Mobile Application will operate under an android phone with Internet connection and a chosen mobile navigation system installed on the phone.

2.5 Design and Implementation Constraints

The only limitation is using Google maps and maybe yelp, not sure yet, on using their software over copyright. I read Google’s policy and it states, under the fair act, that I can use their Google software if the project isn’t for profit or is for presentation purposes. Using yelp, they want their brand to show on the page of the mobile application if using their software.

2.6 User Documentation

All the navigation will be printed on the screen, almost transparent, so the user wouldn’t need a manual to use the mobile application. On the bottom right will be an icon on my copyright for not stealing or using my idea for illegal matters.

2.7 Assumptions and Dependencies

These uses of using Google’s map to identify nearby restaurants and maybe using yelp to look up information on the restaurant will both be use for my Senior Project only. I am not intended to make money off this but use it for my portfolio after college.

3. External Interface Requirements

3.1 User Interfaces

Still awaiting criticism from fellow professors in the university for an actual visual but it will greet you once you tap the screen. It will then allow you to decide whether you want it to use your location or type a location that you will be arriving to. Then their will be a list into which you swipe to decide whether you want the navigation system to act upon to navigate you to your destine choice.

3.2 Hardware Interfaces

The hardware will consist of an android phone with Internet connection.

3.3 Software Interfaces

Once choosing a restaurant, it will automatically send the user to their default navigation system and use their app to help you navigate there.

3.4 Communications Interfaces

It will ask permission to use your location to search the radius for possible restaurant locations. For users who are personal about their location, there is selection on where they can manually enter their address they want to use.

4. System Features

4.1 Real-Time Systems

As the user is driving, the list will continue to add upon the list for every 3 miles driving. It will continuously look around the radius for any possible restaurant.

4.2 Machine Learning

As the user declines a restaurant more than 4 times whether its fast food or a specific ethnicity, as the update of restaurants are added to the list, some will not make the final cut due to the choices of the user.

4.3 Location Verification

It will ask permission to use your location to search the radius for possible restaurant locations. For users who are personal about their location, there is selection on where they can manually enter their address they want to use.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

It is preferred to use 4G mobile Internet speeds when using the app. If you want to use your location, you have to have your location setting “on”. Navigating to your destination is based on the application the user uses.

5.2 Safety Requirements

If they want to do more research on the restaurant they have chosen, they are free to do so on a separate application. This application is only to help with your decision on choosing a restaurant to eat.

5.3 Security Requirements

If the user doesn’t want to use their location, they can manually enter the location they want to search to eat. App ends task once the user “ends task” or removes the app off their phone.

5.4 Software Quality Attributes

The android platform will not be the latest version of android software. This is because I don’t want to limit my app to only android software that older android software can’t retrieve from their android phone.

6. Other Requirements

Appendix A: Glossary

**Mobile Application**: Mostly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet computer.

**IEEE**: A global association and organization of professionals working towards the development, implementation and maintenance of technology-centered products and services.

**Machine Learning**: A type of artificial intelligence that provides computers with the ability to learn without being explicitly programmed.

**Real-Time System**: Reactive computing describes hardware and software systems subject to a “real-time constraint”. Real-time programs must guarantee response within specified time constraints, or deadlines.

**Android Mobile Software**: A software application running on the Android platform. A typical Android app is designed for a smartphone or a tablet PC running on the Android OS.

Appendix B: Analysis Models

