

Gustavo Moreira  
Kazi Omar  
Shanghao Li  
Farah Kamleh  
19 November 2023

## CS 522 - FSP Deliverable #4 - Evaluation Plan

### **Treatments**

For the evaluation study, the first treatment participants will be exposed to is the mobile application developed for the class. It intends to assist students with dietary restrictions in navigating both the menu and space of UIC's dining hall. The second treatment will be an existing mobile application containing the dining hall's menu titled "Dine On Campus" which can be found in the App Store.

### **User Study Tasks**

The user study tasks to be performed in the evaluation study are those that address the user needs gathered from interviews with the mobile application's target users. The first task is for users to discover foods on the menu that fall within their dietary restrictions and add them to their meal plan. The second task is for users to locate the foods listed in their plan within the dining hall space. The intention is for the participants to use the application practically, so they will be performing the tasks inside the dining hall as they would in a real-world scenario.

### **Data Collection**

The majority of the data that will be collected is qualitative rather than quantitative. For the latter, users will provide estimates for how long each task took in order to complete as well as the length of their screen recording. According to the interviewees, they are interested in spending less time locating food and more time consuming food, so the time it takes to do so within a busy space is an important measure of each treatment's success. For qualitative data, factual information will first be collected, as it is important to note which meal of the day they are visiting for and how crowded the space is during their visit; these factors greatly affect their ability to perform their tasks and, as a result, the data collected. To collect qualitative data, the evaluation study will use Hart and Staveland's NASA Task Load Index (TLX) method to assess the tasks using scales labeled from Very Low to Very High.

### **Study Type**

The study type will follow a within-subjects design, exposing all six participants to both treatments. Because evaluating learnability is not the end goal and the tools have a distinct enough approach to the tasks, the same user can be exposed to both treatments for the evaluation study.