Department of Computer Science & Engineering
The University of Texas at Arlington

# System Requirements Specification
# CSE 4316: Senior Design I
# Fall 2024


## Los Tragones
## Social Foodies

Diana Rios
Perla Rivera
Thomas Valenciana
Ahmed Ibrahim
Joshua Harris

## Revision History

| Revision | Date | Author(s) | Description |
|---|---|---|---|
| 1.5 | 10.19.2024 | DR, PR, TV, AI, JH | document creation |
| 1.0 | 10.20.2024 | DR, PR, TV, AI, JH | complete draft |
| 0.0 | TBD | TBD | release candidate 1 |
| 0.0 | TBD | TBD | official release |
| 0.0 | TBD | TBD | added customer change requests |

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# 1 Product Concept

This section describes the purpose use, and intended audience for The **Social Foodies** app. **Social Foodies** is a mobile application design to connect users within a 5 mile radius for social dining experiences. Users can match with others to meet up for meals at nearby restaurants ,and the app tracks the places they visit.It also offers a rewards system where users can earn points for visiting new locations,which can be redeemed for coupons or free meals. **Social Foodies** combines the social engagement of dating apps with the fun of food exploration, making it easy for users to meet new people while discovering new restaurants.

## 1.1 Purpose and Use

The purpose of **Social Foodies** is to provide a platform that allows users to connect with others for the purpose of shared dining experiences.It helps users match with nearby people who are interested in exploring restaurants and enjoying meals together.The app tracks the dining locations users visit and incentives restaurant exploration by offering reward points that can be exchanged for discounts or free meals.The app can be used both for individual meetups or group outings, depending on the user's comfort level. The primary use of the app is as a social and exploration tool for food lovers who enjoy trying new places to eat.

## 1.2 Intended Audience

The intended audience for **Social Foodies** includes individuals who enjoy dining out and are looking for social opportunities to meet new people and share meals. This product targets food enthusiast,young professionals , students, and students in cities with diverse range of restaurant options.It is designed mostly for users aged 18-40 who value social interaction and enjoy exploring different food experiences. Users can engage in one-on-one meetups or group dining experiences, making the app versatile for those seeking to meet new people in different social settings. the app could be made publicly or commercially and is intended for general use by food lovers who appreciate the combination of food discovery,meeting new people, and social engagement.


Figure 1: X conceptual drawing

# 2 PRODUCT DESCRIPTION

This section provides an overview of the **Social Foodies** mobile application, designed to connect users within a 5-mile radius for shared dining experiences. With a concept similar to Tinder but centered around food exploration, the app encourages users to meet up, dine together, and earn rewards for visiting local restaurants. Rewards can be redeemed for discounts, coupons, or free meals. This section details the app's key features, user interactions, and interfaces.

## 2.1 FEATURES & FUNCTIONS

**Social Foodies** offers the following features and functions:

- **Discover Local Restaurants:** Users can explore nearby restaurants based on their preferences and location. The app presents a visual, map-based interface that displays local dining options with vibrant icons, making it easy for users to swipe and select restaurants to match with.
- **Foodie Match Swipe Feature:** Using a swipe-based mechanism (Figure X), similar to dating apps like Tinder, users can swipe right to match with other food lovers interested in the same restaurants or swipe left to pass.
- **Real-Time Chat:** After matching with another user, the app offers a real-time chat interface for arranging meetups, allowing users to coordinate dining plans easily.
- **Reward System:** Users accumulate reward points for visiting participating restaurants, promoting local engagement. These points can be redeemed for discounts, coupons, or free meals at featured establishments. A dedicated section for rewards shows earned points and available redemption's.
- **Profiles and Preferences:** Users create personalized profiles that include their dining preferences (e.g., favorite cuisines, dietary restrictions) and restaurant favorites. Profiles display essential details such as the user's age, preferences, and the date they joined.

## 2.2 EXTERNAL INPUTS & OUTPUTS

The **Social Foodies** app interacts with several external inputs and outputs to function efficiently. These are detailed below:

- **Inputs:**
  - **User Data:** The app requires user-generated information such as profile details (name, dining preferences, geolocation, and dining history). This data helps the app create personalized restaurant suggestions and match users based on proximity and preferences.
  - **Restaurant Data:** Information such as restaurant location, ratings, available rewards, and promotions is sourced from restaurant partners. This data populates the app's map interface and offers users relevant dining choices.
- **Outputs:**
  - **Dining Matches:** The app generates personalized suggestions for both restaurants and potential dining partners based on proximity, user preferences, and restaurant availability. These suggestions are presented visually through a swipe interface.
  - **Reward Notifications:** Users are alerted when they earn points for visiting restaurants. The app also notifies users about available rewards and new offers from participating local restaurants, helping maintain user engagement.

## 2.3 Product Interfaces

The app's user interfaces are designed for simplicity and engagement, incorporating a playful, social theme that promotes dining exploration:

- **Swipe Interface:** The core of the app (Figure X) features a swipe mechanic where users browse restaurant matches and dining partners. The design is similar to Tinder, with options to accept or decline potential matches.
- **Chat Interface:** Users can communicate via a simple chat window once a match is made, facilitating real-time coordination of meetups.
- **Rewards Dashboard:** Users access a dedicated section that tracks reward points earned from dining experiences, as well as available rewards for redemption at local restaurants.

# 3 Customer Requirements

Requirements that describe the User experience, the "look" and "feel" of the application.

## 3.1 Account Creation with FireBase FireStore

### 3.1.1 Description

The user will be able to create an account within the app. The account data will be stored and managed using FireBase FireStore, ensuring secure storage and authentication.

### 3.1.2 Source

The source of the requirement is team member Perla Rivera.

### 3.1.3 Constraints

The app must ensure that FireBase FireStore can handle large volumes of users. The system should be scalable to accommodate at least 10,000 simultaneous users. Additionally, it requires a stable internet connection for account creation and login.

### 3.1.4 Standards

- https://firebase.google.com/docs/firestore/best-practices (FireBase standards)
- https://www.texasattorneygeneral.gov/consumer-protection/file-consumer-complaint/consumer-privacy-rights/texas-data-privacy-and-security-act (Privacy)

### 3.1.5 Priority

High

## 3.2 Tutorial After Account Creation

### 3.2.1 Description

After creating an account, the user will be presented with a tutorial via a series of pop-up windows. This tutorial will be implemented using React Native, covering essential features with a maximum of two pop-ups per concept.

### 3.2.2 Source

The source of this requirement is team members Joshua Harris, Ahmed Ibrahim, Perla Rivera, and Diana Rios.

### 3.2.3 Constraints

The tutorial must be intuitive and easy to follow, ensuring clarity without overwhelming the user. Each concept should be broken down into no more than two pop-ups.

### 3.2.4 Standards

(UX standards according to https://www.uxdesigninstitute.com/blog/10-user-interface-guidelines/)

### 3.2.5 Priority

High

## 3.3 Restaurant Search Based on Preferences

### 3.3.1 Description

The user will be able to see different restaurants according to their given preferences near them in a 5 mile radius. This will be done with location service using Google Maps API.

#### 3.3.2 Source

The source of this requirement is team member Ahmed Ibrahim and Diana Rios

#### 3.3.3 Constraints

Legal compliance with Google Maps API licensing and terms of service must be ensured. The app should also be able to load search results in 10 seconds or less.

#### 3.3.4 Standards

https://developers.google.com/maps/documentation/javascript/best-practices (Google maps API standards)

#### 3.3.5 Priority

High

### 3.4 Chat Room or Forum Feature

#### 3.4.1 Description

The user will have access to a chat room or forum where they can communicate with others before deciding on a restaurant. This feature will be developed by Diana Rios and Perla Rivera.

#### 3.4.2 Source

The source of this requirement is team member Diana Rios, Perla Rivera, and Thomas Valenciana.

#### 3.4.3 Constraints

Content moderation must be in place to prevent the sharing of vulgar or inappropriate content. Messages should be posted and visible to other users in under 2 seconds.

#### 3.4.4 Standards

- https://katten.com/texas-legislates-new-requirements-for-online-interactions-with-minors (For monitoring minors)
- https://yellow.systems/blog/how-to-create-a-chat-room-website (For building the chat)
- https://stackoverflow.com/questions/6728179/what-are-best-practices-and-standards-i-should-follow-while-implementing-a-chat (basic roles to look at)

#### 3.4.5 Priority

High

### 3.5 App Color Scheme

#### 3.5.1 Description

The app's main interface will use a light green color scheme. The specific shade of green will be selected from the React Native color library.

#### 3.5.2 Source

The source of this requirement is team member Thomas Valenciana

#### 3.5.3 Constraints

The color choice must ensure optimal performance across devices and should not affect app functionality. The specified color must be compatible with the React Native library.

#### 3.5.4 STANDARDS

UI standards according to https://dextra.com.mx/img/files/PRODUCTOS/AMX/MXD-430-P/UI.Design.Guide.pdf

#### 3.5.5 PRIORITY

Medium

# 4 Packaging Requirements

This section outlines the packaging requirements for the **Social Foodies** app, specifying how it will be delivered and installed for end users.

## 4.1 Delivery Format

### 4.1.1 Description

The app will be distributed digitally through major app stores, including the Apple App Store and Google Play.

- It will be available for download on both iOS and Android platforms.
- Regular updates will be pushed through app stores to address bugs, improve performance, and introduce new features.

### 4.1.2 Source

The distribution of the app will rely on the app stores' infrastructure (Apple App Store and Google Play) for downloads, updates, and reviews.

### 4.1.3 Constraints

The app will require users to download updates regularly to maintain compatibility with the latest operating systems. Additionally, users must have enough storage space available for installation.

### 4.1.4 Standards

The app will adhere to the submission standards of the Apple App Store and Google Play, including content guidelines, performance requirements, and privacy policies.

### 4.1.5 Priority

High: Ensuring the app is distributed effectively across both platforms is critical for reaching the target audience.

## 4.2 Installation

### 4.2.1 Description

Installation will be automatic upon download for both Android and iOS. The app requires minimal configuration upon first use, such as setting up profiles and permissions for location services.

- Users will create profiles and enable location services for personalized restaurant and match suggestions.

### 4.2.2 Source

The installation process is managed by the app stores (Apple App Store and Google Play), following their respective protocols for app downloads and installations.

### 4.2.3 Constraints

The app will require internet access during installation and user registration. It may also require minimal storage space (approximately X MB) on the user's device.

### 4.2.4 Standards

Adherence to Apple's and Google's installation protocols and best practices for mobile app installations.

#### 4.2.5 Priority

High: Simplifying the installation process to enhance user experience and reduce installation issues.

### 4.3 Branding

#### 4.3.1 Description

The app icon will feature the **Social Foodies** logo, showcasing the social dining concept, as seen in the images provided (Figure X). Consistent branding will be applied throughout the app interface with a clean and user-friendly design.

- The color palette will reflect the brand identity, using soft coral pink and mint green tones (as shown in the design mockups, still in a working-progress).

#### 4.3.2 Source

Internal branding decisions based on the design created by the team and marketing strategies.

#### 4.3.3 Constraints

The branding must adhere to platform-specific design guidelines (Material Design for Android and Human Interface Guidelines for iOS).

#### 4.3.4 Standards

The app will follow UI/UX standards as recommended by MERA (Mobile Experience Review Authority), Material Design for Android, and Apple's Human Interface Guidelines.

#### 4.3.5 Priority

Medium: Maintaining consistent branding is important for user recognition and a seamless experience.

### 4.4 Constraints

#### 4.4.1 Description

The app will require location services to be enabled in order to suggest nearby restaurants and dining partners. Users must also have internet access to receive real-time updates and notifications.

#### 4.4.2 Source

App functionality requirements, based on matching users and suggesting restaurants based on location.

#### 4.4.3 Constraints

Location services must be activated for full functionality, and the app requires regular internet connectivity.

#### 4.4.4 Standards

Compliance with data privacy standards for handling location-based services, including the Texas Data Privacy and Security Act.

#### 4.4.5 Priority

High: Location services and internet connectivity are essential for the core functionalities of the app.

### 4.5 Constraints

#### 4.5.1 Description

The app will adhere to various platform-specific design and privacy standards.

- It will comply with the **Texas Data Privacy and Security Act**, ensuring that user data is handled securely.
- The UI will follow the **Material Design** for Android and **Human Interface Guidelines** for iOS.

#### 4.5.2 Source

Legal standards as outlined by the Texas Data Privacy and Security Act, and platform-specific guidelines from Google and Apple.

#### 4.5.3 Constraints

Compliance with evolving privacy laws and app store design policies is required to ensure the app remains available and functional on both platforms.

#### 4.5.4 Standards

- Texas Data Privacy and Security Act
- Apple's and Google's app store submission requirements
- UI/UX best practices (Material Design and Human Interface Guidelines)

#### 4.5.5 Priority

High: Compliance with data privacy laws and app store guidelines is critical to the app's success and user trust.

# 5 Performance Requirements

This section outlines the critical performance requirements for the **Social Foodies** app. The app is expected to provide an efficient and responsive user experience ,ensuring minimal delays during essential operations such as user matching and location tracking.Performance factors such as speed of connection, battery consumption, and app startup time are important for maintaining a seamless experience for users who rely on the app for social dining and food exploration. The requirements below specify the performance metrics that the app must meet to achieve this.

## 5.1 Battery Usage

### 5.1.1 Description

The app must be optimized to ensure that the battery consumption remains low during regular usage, with no more than 5% of battery drained during 30 minutes of active use on a fully charged device.

### 5.1.2 Source

User feedback and device performance.

### 5.1.3 Constraints

Battery usage may vary depending on the GPS usage,network performance , and the device's battery condition.

### 5.1.4 Standards

General battery usage guidelines for mobile applications.

### 5.1.5 Priority

Medium

## 5.2 StartUp Time

### 5.2.1 Description

The app must fully load and be ready for use within 5 second of launching on a standard smartphone device.

### 5.2.2 Source

User experience and feedback.

### 5.2.3 Constraints

Device performance and network speed may affect the startup time.

### 5.2.4 Standards

No specific Standards apply.

### 5.2.5 Priority

Medium

## 5.3 Location Tracking Accuracy

### 5.3.1 Description

The app must provide accurate location tracking with a maximum reach of 5 miles from the user's actual location to ensure precise matching and restaurant recommendations.

#### 5.3.2 Source

GPS performance.

#### 5.3.3 Constraints

May be affected by GPS signal strength and environment factors such as indoor user,winds, or tall buildings.

#### 5.3.4 Standards

- **Federal Trade Commission (FTC) Guidelines**: The app must provide clear, upfront disclosures about its use of location data and obtain opt-in consent from users before tracking precise geolocation.
- **Texas Privacy Protection Act:**ensure transparency and opt-in consent when collecting and using location data, and comply with security measures to protect the data from unauthorized access.
- **Texas Identity Theft Enforcement and Protection Act (TITEPA):** The app must take reasonable measures to protect personal location data and ensure that users are notified of any data breaches.
- **GDPR Compliance**:User location data must be handled in a privacy-compliant manner, ensuring users consent for data usage and limiting location access to necessary operations.

#### 5.3.5 Priority

High

### 5.4 User Matching Speed

#### 5.4.1 Description

The system must complete the user matching process where they connect users within 5-mile radius in under 5-10 seconds. This is important to ensure a smooth and responsive user experience,especially when users are looking for nearby dining companions in real time.

#### 5.4.2 Source

User performance and testing.

#### 5.4.3 Constraints

Performance may be impacted by the number of active users in a given area and the efficiency of the algorithms implemented.

#### 5.4.4 Standards

No specific standards apply.

#### 5.4.5 Priority

High

### 5.5 History Storage

#### 5.5.1 Description

The app must store the locations users have visited , including restaurant details , date and time of visit. The process of saving this information should be complete within 5 seconds after dining event is logged.

#### 5.5.2 SOURCE

User Feedback and Device Performance

#### 5.5.3 CONSTRAINTS

Storage efficiency may be impacted by the number of users and the frequency of visits logged. Network issues may affect the speed of adding data to the server.

#### 5.5.4 STANDARDS

- **Texas Identity Theft Enforcement and Protection Act (TITEPA):** The app must take reasonable measures to protect personal data and ensure that users are notified of any data breaches.
- **Federal Trade Commission (FTC) Guidelines:** The app must provide clear, upfront disclosures about its use of location data and obtain opt-in consent from users before tracking precise geolocation.
- **GDPR Compliance**:User location data must be handled in a privacy-compliant manner, ensuring users consent for data usage and limiting location access to necessary operations.

#### 5.5.5 PRIORITY

High

# 6 Safety Requirements

The **Social Foodies** mobile application and its development process prioritizes user safety, both during the app's facilitation of in-person dining meetups and the project's laboratory work. These safety requirements ensure compliance with both the app's user safety guidelines and the necessary equipment standards observed in the lab.

## 6.1 Laboratory equipment lockout/tagout (LOTO) procedures

### 6.1.1 Description

Any fabrication equipment provided used in the development of the project shall be used in accordance with OSHA standard LOTO procedures. Locks and tags are installed on all equipment items that present use hazards, and ONLY the course instructor or designated teaching assistants may remove a lock. All locks will be immediately replaced once the equipment is no longer in use.

### 6.1.2 Source

CSE Senior Design laboratory policy

### 6.1.3 Constraints

Equipment usage, due to lock removal policies, will be limited to availability of the course instructor and designed teaching assistants.

### 6.1.4 Standards

Occupational Safety and Health Standards 1910.147 - The control of hazardous energy (lockout/tagout).

### 6.1.5 Priority

High

## 6.2 National Electric Code (NEC) wiring compliance

### 6.2.1 Description

Any electrical wiring must be completed in compliance with all requirements specified in the National Electric Code. This includes wire runs, insulation, grounding, enclosures, over-current protection, and all other specifications.

### 6.2.2 Source

CSE Senior Design laboratory policy

### 6.2.3 Constraints

High voltage power sources, as defined in NFPA 70, will be avoided as much as possible in order to minimize potential hazards.

### 6.2.4 Standards

NFPA 70

### 6.2.5 Priority

High

## 6.3 RIA robotic manipulator safety standards

### 6.3.1 Description

Robotic manipulators, if used, will either housed in a compliant lockout cell with all required safety interlocks, or certified as a "collaborative" unit from the manufacturer.

#### 6.3.2 SOURCE

CSE Senior Design laboratory policy

#### 6.3.3 CONSTRAINTS

Collaborative robotic manipulators will be preferred over non-collaborative units in order to minimize potential hazards. Sourcing and use of any required safety interlock mechanisms will be the responsibility of the engineering team.

#### 6.3.4 STANDARDS

ANSI/RIA R15.06-2012 American National Standard for Industrial Robots and Robot Systems, RIA TR15.606-2016 Collaborative Robots

#### 6.3.5 PRIORITY

High

### 6.4 USER SAFETY GUIDELINES FOR MEETUPS

#### 6.4.1 DESCRIPTION

The application will provide users with guidelines on safe practices for meeting others in person. Recommendations will include meeting in public places, notifying friends or family of plans, and utilizing in-app reporting features for any unsafe or inappropriate behavior.

#### 6.4.2 SOURCE

Best practices for mobile apps that facilitate in-person meetups.

#### 6.4.3 CONSTRAINTS

The app will provide safety guidance but will not assume liability for users' physical safety during meetups. Reporting mechanisms and incident response protocols will be in place to handle complaints or concerns.

#### 6.4.4 STANDARDS

Safety guidelines for social interaction platforms.

#### 6.4.5 PRIORITY

High

### 6.5 IN-APP REPORTING AND INCIDENT RESPONSE

#### 6.5.1 DESCRIPTION

Users will be able to report inappropriate behavior, harassment, or any concerns directly through the app. A dedicated team will review and address these reports in a timely manner to ensure a safe user environment.

#### 6.5.2 SOURCE

Mobile app security and user safety guidelines.

#### 6.5.3 CONSTRAINTS

The reporting system will depend on staffing availability to ensure timely responses. Resources will be allocated based on staffing support.

#### 6.5.4 STANDARDS

Best practices for app safety and incident reporting.

#### 6.5.5 PRIORITY

High

### 6.6 USER EDUCATION ON SAFE INTERACTIONS

#### 6.6.1 DESCRIPTION

The app will provide educational materials on how to interact safely, both online and in-person. This includes information on how to avoid scams, identify red flags, and ensure personal safety during meetups.

#### 6.6.2 SOURCE

Best practices for online dating and meetup applications.

#### 6.6.3 CONSTRAINTS

Educational materials must be updated regularly to reflect evolving safety practices and new risks.

#### 6.6.4 STANDARDS

Standard safety practices for user interaction platforms.

#### 6.6.5 PRIORITY

High

# 7 Security Requirements

To ensure the security and privacy of user data within **Social Foodies**, it is essential to implement robust information security measures. Since the app connects users over shared meals, tracks location data, and manages reward points, protecting personal information and maintaining the integrity of user interactions are paramount. Key security aspects include encryption of sensitive data (both at rest and in transit), strong authentication mechanisms, and secure data storage procedures. Additionally, privacy practices such as limiting location sharing and implementing user consent for data collection must comply with industry standards. The following security requirements are designed to safeguard user data, prevent unauthorized access, and ensure compliance with relevant security standards.

## 7.1 User Authentication and Access Control

### 7.1.1 Description

Ensure that users must authenticate using secure credentials before accessing the app. Implement role-based access control (RBAC) to restrict actions based on user roles (e.g., regular users vs. admins).

### 7.1.2 Source

Protect user data and prevent unauthorized access.

### 7.1.3 Constraints

The system must support multi-factor authentication (MFA) for enhanced security. User sessions should expire after a period of inactivity.

### 7.1.4 Standards

OWASP Authentication Cheat Sheet, NIST 800-63B (Digital Identity Guidelines).

### 7.1.5 Priority

High

## 7.2 Secure Points and Rewards System

### 7.2.1 Description

Prevent manipulation of the rewards system by ensuring secure tracking and redemption of points. Implement validation to avoid fraud.

### 7.2.2 Source

Protect business assets and maintain fair rewards for users.

### 7.2.3 Constraints

Regular audits of the rewards system to ensure integrity. Only authorized users should be able to redeem rewards.

### 7.2.4 Standards

N/A

### 7.2.5 Priority

Medium

## 7.3 Location Privacy

### 7.3.1 Description

Ensure that location data is only shared with other users when explicitly permitted by the user. Limit location data retention.

### 7.3.2 Source

Ensure compliance with privacy regulations and user consent.

### 7.3.3 Constraints

Location data sharing must be opt-in and limited to a specific radius (e.g., 5 miles). Only necessary data should be collected.

### 7.3.4 Standards

GDPR (General Data Protection Regulation), CCPA (California Consumer Privacy Act).

### 7.3.5 Priority

Medium

# 8 Maintenance & Support Requirements

The **Social Foodies** app will require ongoing maintenance and support to ensure it remains functional, secure, and user-friendly after its release. Maintenance tasks will involve correcting errors, ensuring uptime, troubleshooting technical issues, and updating the app with new features and security patches. As this app facilitates social connections over shared meals, it is critical to protect sensitive information like location data and personal details, which mandates a strict focus on privacy and security protocols.

## 8.1 Regular Software Updates

### 8.1.1 Description

The app must be regularly updated to address bugs, improve performance, and implement new security patches.

### 8.1.2 Source

Ensure the app remains secure and functional over time.

### 8.1.3 Constraints

Updates should not disrupt user experience or cause downtime. Updates must be compatible with previous app versions.

### 8.1.4 Standards

ISO/IEC 14764 (Software Maintenance), OWASP Secure Software Development Lifecycle.

### 8.1.5 Priority

High

## 8.2 Data Backup and Recovery

### 8.2.1 Description

Ensure regular backups of user data, points, and activity logs, with a robust recovery plan in case of system failures or data breaches.

### 8.2.2 Source

Prevent data loss and ensure recovery in case of a system malfunction or cyber attack.

### 8.2.3 Constraints

Backups must be performed daily, with the ability to restore data within 24 hours in case of an incident.

### 8.2.4 Standards

ISO/IEC 27031 (Business Continuity), NIST SP 800-34 (Contingency Planning Guide).

### 8.2.5 Priority

High

## 8.3 User Feedback Integration

### 8.3.1 Description

Create a process for gathering, analyzing, and implementing user feedback to improve app features and overall experience.

### 8.3.2 Source

Enhance the app's functionality based on user needs and improve user retention.

#### 8.3.3 CONSTRAINTS

Feedback should be reviewed weekly, with changes implemented in a bi-monthly update cycle.

#### 8.3.4 STANDARDS

ISO/IEC 25040 (System Quality Evaluation), Agile principles.

#### 8.3.5 PRIORITY

Medium

# 9 Other Requirements

This section outlines potential future performance requirements for the **Social Foodies** app. These features aim to enhance user engagement and overall experience, addressing critical areas that could further enrich the app's functionality.

## 9.1 Notifications

### 9.1.1 Description

Implement a system that sends real-time push notifications to users for various activities, such as new invites, nearby matched dining partners, and reminders about upcoming events.

### 9.1.2 Source

Based on user feedback and the need for timely updates to enhance engagement.

### 9.1.3 Constraints

Requires integration of real-time backend services.Managing timely notifications without overwhelming users presents a challenge.Potential privacy issues related to location-based notifications must be considered.

### 9.1.4 Standards

Mobile app notification handling standards.Location-based service privacy policies (e.g., GDPR).

### 9.1.5 Priority

Low

# 10 Future Items

The user should be able to see a menu for any given restaurant that they look up.

## 10.1 Menu Availability for Restaurants

### 10.1.1 Description

The user will be able to see a menu with the application they are looking at, as a separate option when looking at any given restaurant.

### 10.1.2 Source

The source of this requirement is Joshua Harris

### 10.1.3 Constraints

The constraints behind this requirement is the fact that not every restaurant posts their menus on Google Maps, and those that do, do not always post them in an easily scannable format.

### 10.1.4 Standards

https://wnylrc.org/raq/copyright-protocols-restaurant-menus (For copyright purposes)

### 10.1.5 Priority

Future

## References