

SocialSpot

Feature Documentation

A reference of all application features, system interactions, external resources, and security considerations.

Author: Garrett Read

Platform: iOS (iPhone and iPad) | Backend: Supabase | Maps: Apple MapKit

Core Features and How to Use

This section describes each user-facing feature of SocialSpot, organized by the sprint in which it was delivered.

Authentication (Sprint 1)

- Users can sign up or log in using Supabase authentication.
- On success, users are authenticated and a profile record is created in the database.
- Persistent sessions keep users logged in across app restarts.

Map and Location System (Sprint 3)

- The home screen displays a live Apple Map centered on the user's current position.
- Tap the blue location button (bottom right) to re-center on your current position.
- A 500-foot radius circle indicates the visible discovery range.
- Nearby users appear on the map as profile icons and in the Nearby list panel at the bottom of the screen.

Nearby Users (Sprint 3)

Users within 500 feet are displayed in the bottom panel. Each user card shows the following information:

Element	Description
Profile Picture	The user's uploaded or default profile image
Name and Age	Display name and computed age from birthday
School	The user's school or university affiliation
Bio	A short personal description
Social Links	Connected social media account usernames
Distance	Distance from the current user in feet or miles

Tapping a user card reveals their full profile with all connected social media links.

Profile System (Sprint 2)

The profile screen is accessible from the profile tab and provides the following capabilities:

- View their complete profile information.
- Review current application settings.

- Log out of the application or permanently delete their account.

Edit Profile (Sprint 2)

Users can update the following profile fields:

Field	Details
Name	Display name shown to nearby users
Bio	Short personal description
School	School or university affiliation
Social Links	Instagram, Snapchat, TikTok, LinkedIn, YouTube, X (Twitter), and Other

Profile Image

- Users can upload a photo from their library or take a new photo with the camera.
- Images can be cropped before saving.
- Photos are stored in Supabase Storage and the URL is linked to the user's profile record.

Settings (Sprints 2–3)

Dark Mode

- Toggle available in profile settings.
- Updates the entire application theme instantly.

Satellite Map

- Switch between standard and satellite map views from settings.

Share Location (Critical Feature)

This toggle controls the user's visibility in the location system:

State	Behavior
Toggle ON	Your location is shared with nearby users and you can see other users on the map
Toggle OFF	You disappear from other users' maps and the Nearby list is cleared from your view immediately

Account Controls

Action	Behavior
Log Out	Ends the current session and returns the user to the login screen
Delete Account	Permanently removes the user from authentication, the profiles table, and all related database records (via cascade or trigger)

Feature Interactions and System Flow

This section describes how the major features of SocialSpot interact with each other to form a cohesive system.

Authentication → Profile Creation

- New users automatically receive a profile entry in Supabase upon successful authentication.

Profile ↔ Map

- Profile data (name, image, bio, and social links) is displayed on both the map annotations and the nearby users list.

Location Toggle ↔ Nearby System

- **Location ON:** The user's position is inserted or updated in the location system, making them visible to other users.
- **Location OFF:** The user's location record is removed, and they are no longer queryable by other users.

Database ↔ Frontend

Supabase handles authentication, profile storage, and location data. The Swift frontend listens for changes and updates the UI accordingly in real time.

Storage ↔ Profile Images

Profile images follow this pipeline: uploaded by the user → stored in a Supabase storage bucket → public URL saved in the profiles table → rendered in the application UI.

External Resources

SocialSpot integrates with the following external services and frameworks.

Resource	Capabilities
Supabase	Authentication (OAuth + email), PostgreSQL database, file storage (profile images), Row Level Security
Apple Maps (MapKit)	Map rendering, user location tracking, radius visualization
OAuth Providers	Secure third-party login integration

Security and Data Handling

SocialSpot implements several layers of security to protect user data and ensure system integrity.

Measure	Description
Row Level Security (RLS)	Ensures users can only read and write their own data within Supabase tables
Secure File Upload	Validates uploads to prevent oversized files and malicious content
Environment Variables	API keys and secrets are stored in git-ignored xconfig files, never hardcoded in source
Location TTL	Stale location records are automatically removed after a configurable time-to-live period

Summary of System Behavior

The following summarizes the end-to-end system behavior of SocialSpot:

Step	Behavior
1. Authenticate	User signs up or logs in; a profile record is created automatically
2. Share Location	User enables location sharing; their position is broadcast to the location system
3. Discover Nearby Users	Users within 500 feet appear on the map and in the nearby list
4. View Profiles	Tapping a nearby user displays their full profile with social media links
5. Disable Location	Toggling location off removes the user from all other users' views instantly

Supabase acts as the central backend connecting all features: authentication, profile management, location tracking, and file storage. The Swift frontend observes database changes and updates the UI in real time.