



2025/2026 SENIOR DESIGN PROJECT REQUIREMENTS

Ames After Dark



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1. Introduction

Purpose:

Ames After Dark is a mobile-first application designed to make nightlife in Ames, Iowa, safer and more enjoyable. It helps users discover what's happening *right now* at local bars and clubs, while providing tools to connect with friends and share experiences.

Scope:

The app will include:

- Real-time event and deal listings
- An interactive map of bars and friends
- A photo gallery from bar photographers
- A searchable directory of bars with menus and deals
- A user account page for personalization, settings, and friends

The prototype will be cross-platform (iOS + Android), focusing on usability, core features, and realistic functionality.

2. Users & Goals

Primary Users:

- College students (Iowa State and nearby schools)
- Ames residents interested in nightlife
- Bar/event owners (through content management or integrations)

User Goals:

- Quickly find events and best deals at local bars
- Navigate bar crawls with friends
- Access and share bar photos
- Stay connected with friends via map/location features
- Manage their own account, notifications, and connections
- Reserve space at bars for special events

3. Features (Functional Requirements)

The Ames After Dark system will provide the following core functional capabilities:



- **Event & Deal Discovery**
 - Centralized listing of daily and nightly bar specials and events
 - Real-time highlights (ex. busiest bar, cheapest drinks, or featured events)
 - Filtering and search options for events and deals
- **Mapping & Navigation**
 - Interactive map of all Ames bars with open/closed status
 - Friend location sharing (mutual friends only, opt-in)
 - Bar crawl creation and route visualization
- **Photo & Media Access**
 - Weekly galleries of professional bar photos
 - Browsing and filtering by bar and date
 - External download and sharing functionality
 - Secure upload support for bar photographers (verified accounts)
- **Bar Directory & Information**
 - Comprehensive bar profiles with menus, specials, deals, and hours
 - Ability to favorite bars (favorites pinned at top of list)
 - Booking system for graduations, bar crawls, and bottle service
 - Filters to show bars by deals, events, or availability
- **User Accounts & Social Features**
 - Secure user registration and login (email/phone)
 - Profile management (display name, contact info, birthday, avatar)
 - Friend system to add/remove friends for map sharing and event connections
 - Location and notification preference management
- **Bar Owner / Admin Capabilities**
 - Dedicated portal for bars to upload deals, events, and photos
 - Profile management tools for hours, menus, and capacity
 - Role-based permissions for bar staff vs owners
- **Core Infrastructure**
 - Cloud-hosted backend and relational database
 - Real-time syncing of bar data and user activity
 - Cross-platform mobile support (iOS and Android)
 - Secure authentication and data protection

4. Must / Should / Could / Won't (MoSCoW Priorities)

4.1 Must Have (Essential – MVP cannot launch without these)

- Bottom navigation with five core sections (Home, Map, Gallery, Bars, Account)



- Live feed of events and drink specials (regular intervals)
- Highlights for bars (ex. busiest bar, cheapest drinks, or major events)
- Interactive map with pins for all bars and friends (friends-only, opt-in, limited by location and time?) ---
- Weekly photo galleries organized by date
- Photo filters (by bar and date)
- Download/share photos through device's native tools
- Comprehensive bar directory (menus, specials, deals, hours)
- Ability to favorite/unfavorite bars, favorites pinned at top
- Bar filters (ex. open now, deals tonight, live music)
- User profile with display name, email, phone number
- Birthday tracking for users (must-have for age validation, events/perks)
- Password reset, logout and deletion
- Friend system to add/remove friends (only mutual friends visible on map)
- Settings for location sharing and notifications
- Admin portal for bar owners to upload deals, events, photos, and manage bar profiles
- Role-based permissions for all accounts
- Secure authentication (email/phone login)
- Cloud-hosted backend + relational database
- Real-time updates for specials, events, and bar statuses
- Cross-platform support (iOS + Android)

4.2 Should Have (Important but not critical for MVP)

- Personalized “For You” recommendations (favorites/history)
- Push notifications for upcoming events and specials
- Photographer uploads (verified accounts) for gallery
- High-resolution photo viewing
- Advanced booking (graduations, bar crawls, bottle service)
- Notification preferences (choose what alerts to receive)
- Custom avatars and optional social media links
- Admin analytics dashboard (views, favorites, downloads)
- Scheduled specials/events in the admin portal
- Bar crawl creation and visualization on the map



4.3 Could Have (Nice-to-have enhancements if time/resources allow)

- Trending events based on check-ins/attendance
- Ratings and reviews for bars/events
- event suggestions (“Best bar for you tonight”)
- Real-time wait times or cover charges (if supported by data)
- AI auto-tagging of photos (bar/event names, groups)
- Personal in-app gallery for saved/favorited photos
- Loyalty rewards or gamification (points, perks, achievements)
- Direct messaging with bars for reservations
- Birthday perks (discounts, rewards, promotions)
- Premium subscription tiers for bars with advanced tools
- AI-assisted entry of menus/specials from flyers/photos (scraping)
- Directions to specific bars
- Safe route home integrations/notifications (ride-share/taxi links)
- Door cover costs portal for bouncers
- Bar crawl creation and route visualization
- Group tracking mode for bar crawls (multiple friends at once)

4.4 Won't Have (Explicitly out of scope for now)

- In-app ticket sales or payments
- Public visibility of all users on map (friends-only enforced)
- In-app photo editing or unlimited user-generated uploads
- Direct Messaging between users (until further notice)

5. Non-Functional Requirements

- App must work on iOS and Android
- Secure login (email, phone verification, or OAuth)



- Data accuracy: bar status (open/closed) updated hourly
- Accessibility: readable fonts, color contrast

6. Acceptance Criteria

- User can open app and immediately see home page events
- User can filter bars to only those with current specials
- User can see and download bar photos by date/bar
- User can add a friend and see their pin on the map (if accepted and opt-in)

7. Assumptions & Constraints

- Data sources (events, specials, photos) may initially be manually curated
- Bar capacity relies on integrations or manual updates (not guaranteed automated at MVP)
- Prototype will be tested on simulators, test devices, or beta users
- Hosting will use free-tier cloud services during development (unless further resources are required)

8. Ownership & Contributions

- Original idea, brand, and prototype remain the property of Chase Anderson
- Senior Design contributions are for course credit only
- Team members will be recognized as contributors but do not gain ownership rights

