

Social AI – Mobile App Design Document

1. Overview

Social AI is a mobile application designed to help users understand, grow, and optimize their social media presence using AI-driven insights. Users can link their social media accounts, view detailed analytics, and interact with an intelligent AI assistant trained on their account data. The assistant provides insightful answers to questions, recommends strategies, and helps create tailored action plans for growth and engagement.

2. Features & Functional Requirements

2.1 User Authentication & Subscription

User Account Creation:

- There's really no account creation, the user will sign in via their social account of their choosing? CONFIRM THIS CAN WORK
 - Cloudflare or Supabase to start with if they can't sign in with their social accounts

Subscription Tiers:

- **Free Tier:** Access to basic analytics and limited AI queries per month. - 10 messages a month
- **Pro Tier:** Unlimited AI queries, deep data insights, cross-platform analysis, and growth strategy generation. - unlimited everything (\$10 - \$15/month?)

User Authentication:

- Secure login with multi-factor authentication (MFA).
 - Built in with their social media account
- Password reset and email verification features.

User Dashboard (Landing Page):

- View summary stats for that platform
 - They will have the option to switch between social accounts they've signed into (X, Instagram, Facebook, TikTok)
- Track AI conversations and saved strategies.

Chat Section (tab on the bottom of the screen):

- Open a chat log with Gemini or ChatGPT.
- Have a view where they can see all their insights so they don't have to navigate back to dashboard to see them

Settings Page:

- The ability to unsubscribe and view their current billing details

2.2 Social Account Integration & Data Sync

Platform Linking:

- Users can link social accounts from Instagram, TikTok, YouTube, X (Twitter).
- OAuth integration for secure access.

Data Sync:

- Pulls metrics such as:
 - Followers, impressions, engagement rate, reach, video views.
 - Post performance by type, time, and caption style.
 - Follower growth trends and audience demographics.
- From Meta's APIs. Check if X and Tik Tok have same APIs

Historical Data Access: Maybe????

- Sync last 30 days for free users.
- Extended history for Pro users (3–12 months depending on tier).

2.3 AI Assistant & Insights Generation

AI Chat Assistant (powered by GPT-4 / Claude/ Gemini):

- Users can ask any question about their social media performance:
 - “What was my top-performing reel this month?”
 - “What’s the best time for me to post on Wednesdays?”
 - “What content gets the most saves?”
- Natural language replies with visual breakdowns and linked data points.
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Personalized Strategy Generator:

- AI suggests content ideas, post timing, and growth strategies.
- Generates weekly/monthly goals based on trends.
- Detects underperforming content and offers fixes.

2.4 Reporting & Visualization

Custom Queries:

- Users can ask for visual charts:
 - “Show my engagement rate trend over the past 3 months.”
 - “Compare post saves vs. likes in a bar chart.”

Historical Trend Tracking:

- View analytics history.

- Filter data by platform, post type, or date.
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2.5 Additional Features

Content Recommendation Engine:

- AI suggests content topics, formats (e.g., carousel, video), and hashtags.
- Tailored to user's audience behavior.

Goal Setting:

- Users can set goals (e.g., gain 500 followers this month).
 - AI tracks progress and offers suggestions to improve chances.
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3. Technical Requirements

3.1 Tech Stack

Frontend:

- NextJS
- Tailwind CSS with custom components for clean UI.

Backend:

- Node.js with Express or NestJS.
- Supabase or Firebase for authentication and real-time DB, or Cloudflare.
- PostgreSQL (via Prisma ORM) or MongoDB for analytics storage.

AI & NLP:

- OpenAI GPT-4 (API-based) or Claude or Gemini for natural language processing.
- Pinecone or Supabase Vector for embedding & retrieval of personalized data.
- Prompt templating for consistent AI behavior.

Social Platform APIs:

- Instagram Graph API, YouTube Data API, TikTok Creator API, X API, etc.
- Webhooks or polling for scheduled updates.

Payments & Subscriptions:

- Stripe integration for in-app payments.
- Subscription management via Stripe Customer Portal.

Hosting & Cloud Services:

- Firebase Storage or AWS S3 for report exports and media uploads.
- Vercel or Heroku for backend deployment.

3.2 Security Considerations

- OAuth-based secure account linking.
- Role-based access for internal tools.
- **Rate-limiting and abuse protection for AI queries.**

4. User Experience (UX) & Design Considerations

Intuitive UI:

- Clean, data-first layout with charts and metrics at a glance.
- Conversational chat assistant UI with smart prompt suggestions.

Dark & Light Mode:

- System-based theme detection with user preference override.

Gamification:

- Points and badges for consistent posting, audience growth, or strategy usage.

Accessibility:

- Voice-to-text queries for AI.
 - Text-to-speech for AI responses.
 - Dynamic font sizing and high-contrast modes.
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5. Conclusion

Social AI provides a powerful, user-friendly platform for creators, influencers, and social media managers to track, understand, and improve their performance. By merging traditional analytics with AI-driven conversation and recommendation tools, users can unlock actionable insights that drive real growth. Future developments may include voice assistant integration, AI video content planning, and deeper CRM-style features for creators managing communities.