**Project: FridgeChef - Full A to Z Feature Documentation**

**🏠 Overview**

FridgeChef is a smart cooking and food management mobile app powered by AI. It aims to reduce food waste, make daily cooking easier, and deliver health-conscious personalized meal planning. This document outlines every feature, user flow, interaction, and technical idea to help you build, pitch, and monetize this application.

🔒 **Note:** FridgeChef operates on a freemium model. Some features will be **strictly premium**, available only via a **paid subscription**. Users will have access to a **limited trial** version to explore core functionality before subscribing. The trial will be time-bound and usage-capped to ensure serious conversion without overexposure.

**✨ Core Features (A to Z)**

**1. Authentication & User Profiles**

**Features:**

* Email/Password Login and Sign-Up
* Social Sign-In (Google, Apple)
* Secure token-based auth with refresh logic
* User profile with preferences (diet, allergies, cuisine, etc.)

**User Flow:** On first launch, users sign up or log in. Preferences are collected to personalize future experiences.

**2. Smart Fridge Scanner *(Premium)***

**Features:**

* Use camera to scan fridge or pantry
* Detect ingredients via image recognition (ML model or OpenAI Vision)
* Manual editing of detected ingredients

**User Flow:** Users open scanner, take photo, AI returns ingredient list, and user confirms items. Available for trial use (e.g., 3 scans) before requiring subscription.

**3. Ingredient Manager**

**Features:**

* Add/edit/delete ingredients manually
* Group by categories (vegetables, dairy, grains)
* Track quantity and expiration dates

**User Flow:** Navigate to Ingredient Manager, where all tracked ingredients are listed. Alerts for expiring items are shown.

**4. Expiration Tracker *(Premium)***

**Features:**

* Auto or manual expiry date setting
* Alerts before expiry
* Food waste log

**User Flow:** When ingredients are added, expiry can be set. A dashboard shows "Use soon" ingredients. Included in trial.

**5. AI-Powered Recipe Generator *(Premium)***

**Features:**

* Suggests recipes using available ingredients
* Option to exclude disliked items
* Filters by cuisine, dietary restriction, meal type

**User Flow:** Click "What Can I Cook?" button. AI recommends recipes using in-fridge items. Trial limited to a few recipe generations.

**6. Recipe Details Page**

**Features:**

* Ingredients list
* Cooking steps
* Nutritional information
* Scaling for servings
* Save/favorite recipe

**User Flow:** Clicking on a recipe opens a detailed view with interactive checkboxes and timers. Some premium recipes locked without subscription.

**7. Grocery List Generator *(Premium)***

**Features:**

* Auto-generate missing ingredients for selected recipes
* Add custom items manually
* Share/export list

**User Flow:** After selecting recipes, click "Generate Grocery List" to view/download/share items. Trial allows export for 1–2 lists.

**8. Meal Planning Calendar *(Premium)***

**Features:**

* Drag-and-drop recipes into days
* Set meal times (breakfast, lunch, dinner)
* Reminders & notifications

**User Flow:** Navigate to calendar. Add meals to dates. App notifies on cooking time. Premium only after trial.

**9. Nutritional Tracker *(Premium)***

**Features:**

* View macros and calorie breakdown per meal
* Daily/weekly nutrition overview
* Integrate with fitness apps (Google Fit, Apple Health)

**User Flow:** On recipe view, show "Nutritional Info" and allow tracking.

**10. Diet & Allergy Filters**

**Features:**

* Filter all recipe suggestions
* Preferences stored in user profile

**User Flow:** During onboarding or settings, user sets diet and allergy filters. Free and available in trial.

**11. Waste Reduction Analytics *(Premium)***

**Features:**

* Shows how much food saved
* Money saved estimates
* Environmental impact metrics (water, emissions saved)

**User Flow:** Dashboard view with graphs based on usage and fridge tracking.

**12. Recipe Creator Marketplace *(Premium)***

**Features:**

* Chefs/home cooks can upload recipes
* Set prices for premium recipes
* Community review & rating system

**User Flow:** Creators apply for verified status, then upload via web or mobile portal.

**13. Social Features *(Premium)***

**Features:**

* Comment on recipes
* Share meals cooked
* Follow other users/creators

**User Flow:** Each user has public profile and "My Meals" feed.

**14. Grocery API Integration *(Premium)***

**Features:**

* Link to grocery delivery partners (Instacart, Amazon, etc.)
* Auto-cart generation from shopping list

**User Flow:** After generating a grocery list, click "Order Now" to redirect to delivery partner.

**15. Notifications & Reminders**

**Features:**

* Meal prep alerts
* Expiration date reminders
* Personalized weekly recipe recommendations

**User Flow:** Managed via notification settings in profile.

**16. Settings & Preferences**

**Features:**

* Theme switching (dark/light)
* Notification toggles
* Account management (delete, logout, etc.)

**User Flow:** Accessible via profile tab.

**📆 Milestones**

**Phase 1: MVP (1–2 months)**

* Auth (email/Google)
* Ingredient manager (manual)
* Recipe generator (static or basic AI)
* Grocery list
* Basic profile

**Phase 2: Smart Core (2–4 months)**

* Fridge scanner (AI/photo)
* Expiration tracking
* Recipe scaling + nutrition info
* Meal planning calendar

**Phase 3: Monetization & Community (4–6 months)**

* Premium subscription model
* Marketplace
* Social feed & comments
* Grocery delivery integration

**Phase 4: Scaling & Growth**

* Mobile + web version
* Multilingual support
* B2B version (restaurants, gyms, schools)
* Creator campaigns

**💰 Monetization**

* Freemium Model with **strict trial**
* Grocery Affiliate Revenue
* Premium Recipes
* Sponsored Content
* Kitchen Gear Affiliate (Amazon)

**✨ Summary**

FridgeChef is positioned to be an intelligent, all-in-one kitchen companion solving real-world problems of waste, meal stress, and health. With strong tech, solid UX, and smart monetization, this app has the potential to scale globally and become a daily-use product. Premium access unlocks powerful, AI-driven tools that make FridgeChef a must-have for modern households.