ChatGPT

Product Requirements Document: KitchenFlow Trainer

Version: 1.0
Owner: Jared Sanford
Reviewed By: Chef Matt, Design Lead, Engineering Lead, QA Lead
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1. Purpose & Scope

KitchenFlow Trainer is a mobile-first, offline-capable app for restaurant kitchens. It reduces onboarding time, ensures consistency in cooking and plating, enforces cleanliness and safety standards, and gives managers real-time training insights. Initially deployed at Lakeside Kitchen.

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2. Problem Statement

- Staff turnover creates constant training needs.
- Inconsistent plating affects quality.
- Paper checklists are error-prone and unauditable.
- No system to monitor individual progress or identify weak points.

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3. Goals & Success Metrics

Objective	Metric	Target
Reduce onboarding time	Avg. days to complete core modules	↓ 30% in 6 mo
Improve plating consistency	AI photo check pass rate (first try)	≥ 75%
Boost confidence	Post-training survey "Satisfied" rate	≥ 80%
Increase adoption	New hires logging in within week	≥ 90%
Maintain engagement	Avg. trainee sessions (30-day)	≥ 3/week

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4. Personas

- **New Cook (Novice)** – Needs visual, guided cooking and confidence.
- **Prep Cook (Experienced)** – Wants to learn Lakeside-specific techniques.
- **Sous-Chef/Trainer** – Reviews builds, sees AI failures, and mentors.
- **Chef/Owner** – Views analytics, compliance, and quality trends.

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5. User Stories

- As a line cook, I want timed, step-by-step cook mode so I don't mess up.
- As a trainer, I want to see who failed AI checks so I can help them.
- As a closer, I want a cleaning checklist so nothing is missed.
- As a manager, I want reports that show our best and worst performers.

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6. Functional Requirements

6.1 Authentication

- **FR-1**: PIN login with session cookie.
- Auto logout after 30 minutes (non-functional req).

6.2 Guided Cook Mode

- **FR-2**: Step-by-step instructions with media, overlays, timers.
- **FR-3**: Step state persists on page reload.
- **FR-4**: Auto-navigate to AI check if `quality_check = true` on final step.

Embedded Prompt

```
SYSTEM: You are KitchenFlow's sous-chef. Present the next step clearly.
USER: {dishName}, step {currentStep}/{totalSteps}. Instruction: "{instruction}".
```

6.3 AI Quality Check

- **FR-5**: Take photo of plated dish from camera.
- **FR-6**: Return `{ isCorrectlyBuilt, feedback[] }`.
- **FR-7**: Save result locally and to user profile.

Embedded Prompt

```
SYSTEM: You are a culinary judge. Score {userImage} against {referenceImage}.
Return build accuracy 0–100. isCorrectlyBuilt = score ≥ 80.
Give 1–3 actionable tips.
```

6.4 Quick Reference

- **FR-8**: Searchable table of temperatures, prep procedures, allergens, safety, etc.

6.5 Shift Prep Board

- **FR-9**: Editable par/stock display with color-coded status.
- **FR-10**: "Need to Prep?" wizard (planned for v2).

6.6 Cleaning & Close-Down

- **FR-11**: Daily and weekly cleaning tasks tracked per user. Media optional.

6.7 Progress & Gamification

- **FR-12**: XP, badges, levels, build streaks.
- **FR-13**: Last failed steps/AI checks stored for review.

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7. Non-Functional Requirements

Requirement	Target
Performance	95% pages < 1s load on Wi-Fi
Reliability	$\geq$ 99.5% uptime
Accessibility	WCAG 2.2 AA
Offline Mode	Cache static assets + 3 dishes
Security	OWASP mitigated; AI images purge $\leq$ 24h

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8. Technical Architecture

- **Frontend**: Next.js 14, Tailwind, Shadcn UI
- **State**: Hooks + Edge KV for progress
- **AI**: Genkit (Google Vision) via API routes
- **Auth**: HttpOnly cookie via `middleware.ts`
- **UI Reference**: See `ui.txt` for layout/colors

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9. Milestones

Phase	Deliverables	Target Date
Design Sprint	Wireframes, UI, route map	2025-07-01
MVP Alpha	Auth + 3 dishes + closing checklist	2025-08-15
Pilot Launch	Deployed to 5 Lakeside tablets	2025-09-01
MVP Beta	Cook mode + AI photo check + progress	2025-10-10
Full Launch	All dishes + PrepBoard + QuickRef	2025-11-30
v2 Expansion	Authoring UI + multi-location support	Q1 2026

10. Acceptance Checklist

- [ ] Auth required on all app routes
- [ ] App installable as PWA on iPads
- [ ] AI check returns in ≤ 5s
- [ ] Timer delay enforced (`force_wait=true`)
- [ ] Checklist state saves per user per day
- [ ] Shift Prep % logic verified
- [ ] CSV export for closing results
- [ ] AI fails create feedback cards
- [ ] Offline works for last 3 viewed dishes

11. Risks & Mitigations

Risk	Level	Mitigation
Wi-Fi outages	Med	Offline caching, queue photo uploads
AI scoring false negatives	Low	Manual override + trainer review
Image privacy	Med	Auto-delete within 24h, blur faces (if any)

12. Glossary

- **Genkit**: Google's AI workflow SDK (for photo checks)
- **Par Level**: Ideal inventory amount
- **TCS Food**: Time/Temperature Control for Safety
- **QuickRefItem**: JSON shape for temp/prep/safety facts