DineFlow AI – Full BRD (Business Requirements Document)

1. Introduction

DineFlow AI is a SaaS platform offering QR-based ordering, digital menus, loyalty, coupons, AI automation, POS integration, and real-time restaurant workflow tools...

2. Vision

To digitize restaurant operations through an AI-powered omni-channel ordering and guest engagement system...

3. Scope

- QR Menu

- Order Management

- Payments

- Loyalty Engine

- Coupon Engine

- AI Menu Optimization

- POS Sync

- Multi-tenant SaaS Admin...

4. System Users

- Customers

- Restaurant Staff

- Kitchen Staff

- Restaurant Admin

- SaaS Super Admin...

5. Functional Requirements

5.1 Customer-facing

- QR Scan

- Browse digital menu

- Add to cart

- Pay online

- Earn coins...

5.2 Restaurant Dashboard

- Manage menu

- Control pricing

- Track orders

- Kitchen display...

5.3 Super Admin

- Manage restaurants

- Subscription billing

- Analytics

- Plan management...

6. Non-functional Requirements

- Scalability

- Multi-tenancy

- Security

- High availability...

7. Integrations

- Payment gateways (UPI, Stripe)

- WhatsApp API

- SMS

- POS...

8. Data Model (High-Level)

- Users

- Restaurants

- Menu Items

- Orders

- Payments

- Loyalty Transactions...

9. AI Components

- Smart recommendations

- Automated menu insights

- Offer optimization...

10. Deployment Architecture

- Frontend: React/Next.js

- Backend: Node.js/Nest.js

- DB: PostgreSQL (multi-tenant)

- Queue: Redis

- CDN...

11. Subscription Model

- Per-outlet pricing

- Usage-based add-ons

- Tiered plans...

12. Risks & Mitigation

- Payment issues

- Downtime

- POS sync errors...

13. Conclusion

DineFlow AI enables restaurants to digitize operations end-to-end using QR ordering and AI-driven automation.