

Product Requirement Specification (PRS) – AI Finance Platform

1. Product Overview

Product Name: AI Finance Platform

Type: AI-powered full-stack web application

Purpose: To help users manage, analyze, and forecast their financial activities using AI insights. It automates budgeting, expense tracking, and investment recommendations through personalized dashboards.

Core Value: Simplifies personal and business finance management by leveraging Gemini AI for real-time analytics and smart decision-making.

Target Users: Individual investors, business owners, students, and financial advisors.

2. Functional Requirements

Feature	Description	Priority
User Authentication & Onboarding	Secure sign-up/login; collects user income, spending habit	High.
Finance Dashboard	Displays total balance, expenses, income trends	High
Expense Tracking	Users can add, edit, and categorize transactions automatic AI	Medium
Budget Planner	AI-generated monthly or custom budget recommendations	High
AI Investment Insights	Provides stock, crypto, and savings suggestions based on pattern	Medium
Report Generation	Exports personalized financial reports to PDF or Excel.	Medium
Notifications & Reminders	Alerts for bill payments, budget limits, and savings milestones	Medium
Admin Portal	For monitoring usage analytics and managing users.	Low

3. Non-Functional Requirements

Category	Requirement
Performance	App should respond within 2–3 seconds for key actions.
Scalability	Supports up to 20,000 active users simultaneously.
Security	Implements encryption, authentication (Clerk), and role-based access.
Usability	Responsive UI using Tailwind CSS and Shadcn UI.
Availability	99% uptime with fallback and retry systems.
Integration	Supports Plaid API or financial data APIs for real-time balance updates.
Maintainability	Built using modular Next.js + Prisma architecture.
AI Integration	Uses Gemini AI for predictions and insights.

4. System Architecture

Frontend: Next.js 15 + React 19 (Tailwind CSS, Shadcn UI)

Backend: NeonDB (Serverless PostgreSQL) + Prisma ORM

Authentication: Clerk for secure user management

AI Engine: Gemini AI for budgeting, predictions, and analytics

Automation: Inngest for transaction updates and scheduled reports

Deployment: Hosted on Vercel with CI/CD integration

5. Success Metrics

Metric	Target
User satisfaction rating	≥ 90%
Monthly active users	≥ 15,000
Budget planner usage	≥ 70% of users
AI prediction accuracy	≥ 85%
Report exports per user	≥ 2 per month

6. Risks and Mitigation Strategies

Risk	Impact	Mitigation
AI predictions may be inaccurate	Medium	Continuous model retraining and data validation
User data privacy issues	High	Implement end-to-end encryption and GDPR
Third-party API downtime	Medium	Add caching and fallback mechanisms.
Low user retention	Medium	Personalized financial goals and regular insight

7. Future Enhancements

- Mobile app version (React Native)
- Multi-currency and international banking integration
- AI voice assistant for finance queries
- Integration with stock trading APIs
- Expense prediction charts using ML forecasting
- Gamified savings goals and streak rewards