# Detailed Project Report (DPR)

## iNeuron

## 1. Project Overview

\*\*Project Name:\*\* Funku Online Store  
\*\*Developed By:\*\* [Dharam Chopda]  
\*\*GitHub Repository:\*\* https://github.com/Dhach123/ai\_ecommerce\_project  
\*\*Certification:\*\* iNeuron Certified Project

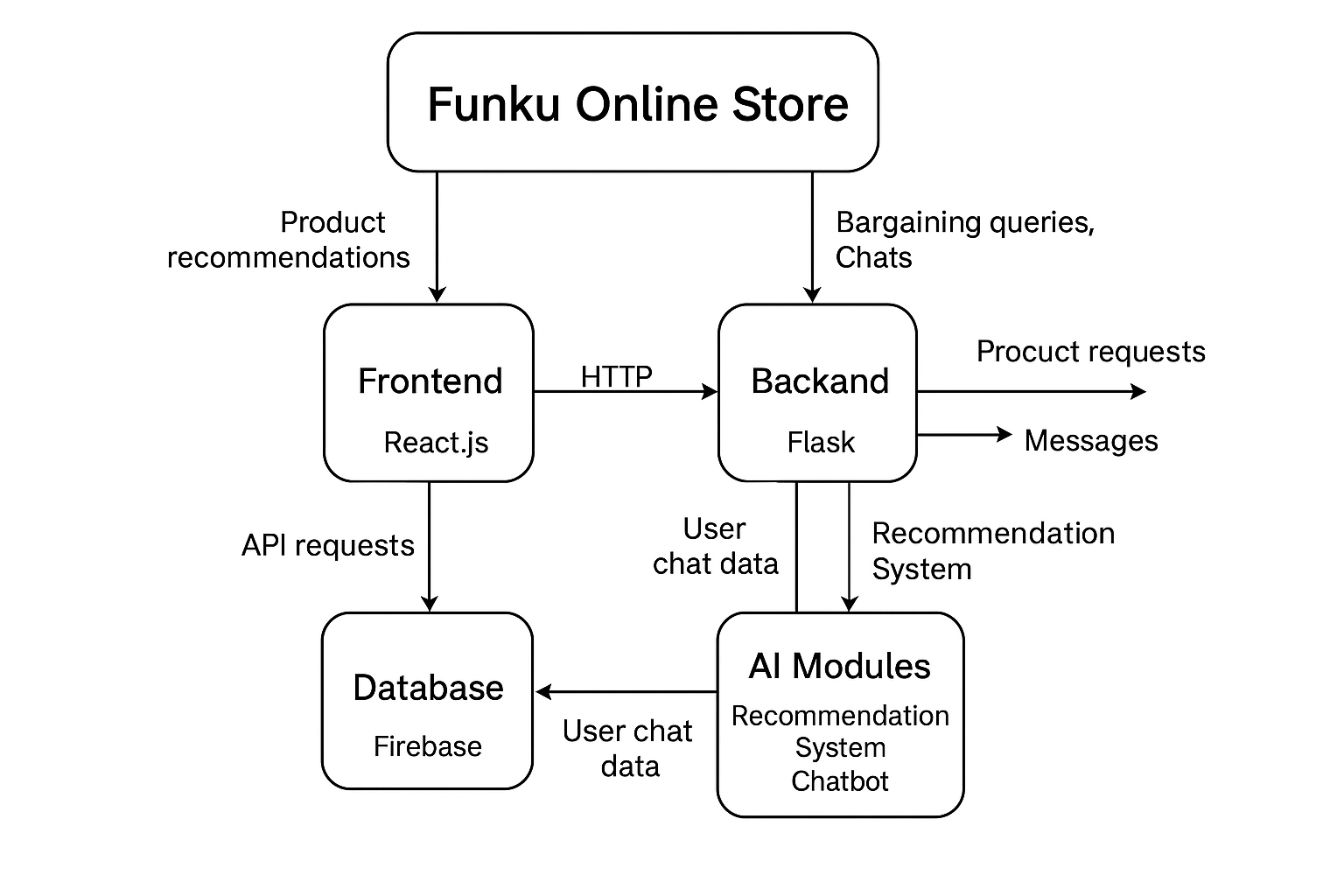
The Funku Online Store is an AI-powered e-commerce platform that integrates advanced AI-driven recommendations, a bargaining system, and a chatbot to enhance user shopping experiences.

## 2. Project Objectives

• Develop an AI-based recommendation system to enhance user experience.  
• Implement an AI-driven chatbot for bargaining and customer support.  
• Utilize Firebase Firestore for real-time chat storage.  
• Design an intuitive and user-friendly interface using React.js.  
• Deploy a robust backend using Flask with RESTful APIs.

## 3. System Architecture

The Funku Online Store follows a \*\*client-server architecture\*\*, with a React.js frontend communicating with a Flask backend. The backend handles API requests, integrates AI modules, and interacts with Firebase Firestore for data storage.



## 4. Key Features

• \*\*AI-Powered Recommendation System:\*\* Suggests products based on user behavior.  
• \*\*AI Chatbot:\*\* Provides customer support and enables price negotiation.  
• \*\*Bargaining System:\*\* Users can negotiate prices in real-time.  
• \*\*Firebase Integration:\*\* Stores chat data securely.  
• \*\*RESTful API:\*\* Facilitates seamless interaction between frontend and backend.  
• \*\*Scalability:\*\* Designed to handle multiple users efficiently.

## 5. Technologies Used

• \*\*Frontend:\*\* React.js, Bootstrap  
• \*\*Backend:\*\* Flask, Flask-CORS, Flask-RESTful  
• \*\*Database:\*\* Firebase Firestore  
• \*\*AI Models:\*\* NLP-based chatbot, recommendation system  
• \*\*Deployment:\*\* Localhost (development), Firebase Hosting (optional)

## 6. Development Process

• \*\*Phase 1:\*\* Requirement Analysis and System Design.  
• \*\*Phase 2:\*\* Frontend and Backend Development.  
• \*\*Phase 3:\*\* AI Model Integration for Chatbot and Recommendations.  
• \*\*Phase 4:\*\* Database Setup and Testing.  
• \*\*Phase 5:\*\* Deployment and Future Enhancements.

## 7. API Endpoints

\*\*Backend API Endpoints:\*\*  
• `/chat?message=your\_message` → Handles chatbot queries.  
• `/recommendations?user\_id=123` → Fetches personalized product recommendations.  
• `/cart` → Manages shopping cart actions.  
• `/checkout` → Handles the order confirmation process.

## 8. Future Enhancements

• Deploy the backend on Google Cloud Run or AWS Lambda.  
• Improve chatbot AI using GPT-4.  
• Implement Firebase Authentication for secure user login.  
• Introduce an AI-driven voice assistant for a more interactive experience.

## 9. Conclusion

The Funku Online Store successfully integrates AI-powered recommendations, bargaining capabilities, and chatbot features to enhance the online shopping experience. Future improvements will focus on deployability, security, and enhanced AI functionalities.

## 10. Contributors

[Dharam Chopda] ([Dhach123/ai\_ecommerce\_project](https://github.com/Dhach123/ai_ecommerce_project))

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