

ABSTRACT

Rambutan Warehouse

Rambutan Warehouse is an innovative online platform that integrates advanced e-commerce capabilities with intelligent tools to enhance the sale, distribution, and management of rambutan fruits and related products. Tailored for diverse user roles—farmers, wholesale buyers, administrators, and regular consumers—the platform fosters seamless collaboration and efficient trade within the rambutan ecosystem.

Key Functionalities and Technologies:

1. Farmers:

- Product Management: Effortlessly list, update, and manage rambutan inventory.
- Sales Insights: Monitor real-time sales performance and receive personalized recommendations on market trends and pricing.
- Image Verification System: Leverage machine learning to ensure that uploaded images correspond to rambutan fruits, preventing fraudulent or accidental uploads of incorrect products.

2. Wholesale Buyers:

- Smart Bulk Ordering: Place and manage bulk orders efficiently with optimized delivery schedules.
- Negotiation Assistant: Utilize AI-driven tools to recommend fair pricing based on market conditions and historical data.
- Inventory Forecasting: Leverage predictive analytics for planning future purchases.

3. Regular Consumers:

- Personalized Recommendations: AI-powered suggestions for fresh and processed rambutan products based on preferences and purchase history.
- Wishlist Integration: Save and revisit favourite products with the Wishlist feature.

4. Administrators:

- Enhanced Oversight: Oversee platform activities and resolve issues with streamlined dashboards.
- Analytics Suite: Utilize insights from user activity and sales patterns to improve platform operations.

Technologies and Tools:

- Frontend: Responsive and user-friendly interfaces built using HTML, CSS, and JavaScript frameworks.
- Backend: Robust data management powered by Django with scalable APIs for seamless integration.
- Database: SQLite for core operations with the flexibility.
- Machine Learning: Integrated image detection to verify product authenticity and improve the quality of listings.
- Secure Payment Gateway: Ensures encrypted and reliable transactions.