



A Web Based Product Management System for Personalized Product Recommendation

UNDERGRADUATE THESIS
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Sarjana Komputer (S.Kom)

By:
MUHAMMAD AZHAR KHOIRULLOH
Student ID No: 012202200023

Supervised by
Ronny Juwono, S.Pd., M.T.

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Program Faculty of
Computer Science
PRESIDENT UNIVERSITY
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Chapter 1

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ABSTRACT

After-sales service plays a vital role in customer satisfaction and long-term business success, yet many organizations struggle with efficiently managing product-related data and delivering personalized support. In the automotive and retail sectors, customers often face challenges in finding the right spare parts or follow-up products based on their past purchases. Existing systems typically lack intelligent recommendation features and centralized management, which hinders customer engagement and limits business insights.

To address these issues, this project introduces AIS (After Sales Information System), a web-based product management platform designed to enhance the post-purchase customer experience through personalized product recommendations. The system integrates transactional data processing with a collaborative filtering algorithm to recommend relevant spare parts or follow-up items tailored to each customer's purchase history. AIS also includes a streamlined interface for managing product information, sales data, and customer profiles, ensuring centralized control and improved decision-making.

Key features of AIS include structured product categorization, a hybrid recommendation engine that combines collaborative and content-based logic, and evaluation metrics to track algorithm accuracy. By offering intelligent suggestions and simplifying data management, AIS aims to increase customer retention, optimize inventory usage, and support data-driven after-sales strategies.

Ultimately, this platform bridges the gap between product usage and post-sale engagement, empowering businesses to deliver proactive, personalized service while unlocking valuable insights from customer behavior.

Keywords: Product Management System, Personalized Recommendation , Web-Based Application, User Behaviour, Recommendation Engine, Content-Based Filtering.

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