AL AND IOT TECHNOLOGY IN AUTOMOTIVE PARTS MANUFACTURING

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ABSTRACT

Supply chain optimization is essential for improving efficiency, reducing costs, and enhancing the overall responsiveness of businesses to market demands. This project focuses on developing a **data-driven approach** to streamline **supply chain operations** by integrating advanced technologies such as machine learning, predictive analytics, and optimization algorithms. Key objectives include demand forecasting, inventory management, route optimization, and real-time tracking to minimize delays and operational costs.

Our methodology involves analyzing **historical data**, identifying inefficiencies, and implementing strategic solutions to enhance **decision-making**. By leveraging automation and **AI-based models**, the project aims to improve **supply chain resilience**, reduce waste, and increase profitability. The implementation of smart logistics and **data analytics** ensures seamless coordination between suppliers, manufacturers, and distributors, enabling real-time **adaptability** to market fluctuations.

This research contributes to the development of a robust and scalable **supply chain framework** that enhances sustainability, reduces risks, and improves customer satisfaction. The findings of this study will benefit industries seeking to optimize their supply chain networks for greater efficiency and competitiveness in today's **dynamic business** environment.

Keywords:

Supply Chain Optimization, Data-Driven Approach, Historical Data, Decision-Making, Supply Chain Resilience, Supply Chain Framework.