

Role of Big Data Analytics in Enhancing Business Performance with RFID

In today's data-driven world, businesses are constantly exploring competitive ways to improve their overall performance. One of the most transformative technologies in recent years has been the use of Radio Frequency Identification (RFID) technologies combined with Big Data analytics. This integration offers significant opportunities for organizations across various industries to revolutionize their operations and decision-making processes. Big Data analytics involves examining large datasets to discover patterns using methods such as data mining and machine learning. RFID technology employs electromagnetic waves for wireless data transmission, connecting the physical world with data collection. Through Big Data analytics, businesses can make optimized decisions, giving them a competitive edge by enhancing processes and customer interactions. Moreover, these tools lead to cost savings by improving supply chain management, predicting maintenance, and reducing energy consumption.

Businesses are increasingly utilizing RFID technologies for real-time data analysis, streamlining decision-making, and monitoring operations. With the growth of the Internet of Things (IoT), there has been a significant increase in device connectivity, contributing to a surge in data streams. These technologies support tailored customer experiences based on individual behavior. Additionally, supply chain management benefits from timely insights into inventory and shipments, leading to optimized efficiency and fewer delays. The future holds exciting possibilities, such as predictive maintenance, healthcare applications, smart cities, and environmental monitoring. Current trends indicate a growing reliance on real-time data, personalized customer experiences, and supply chain optimization. However, challenges related to data privacy, integration, skills, and scalability must be addressed proactively. The primary aim of this Special Issue is to bring researchers and academic professionals together to address the intersection of Big Data Analytics and RFID Technologies and their combined impact on enhancing business performance.

List of Topics:

- Exploring the synergy between RFID technology and Big Data for Inventory Management.
- The Role of Big Data Analytics in Optimizing RFID Communication Networks.
- Ethical Considerations in RFID Data Collection and Analysis.
- The Interplay between IoT Devices, RFID Technologies, and Big Data Processing.
- Machine Learning Techniques for Efficient RFID Data Interpretation.
- Enhancing Customer Experiences in Retail through Big Data and RFID Integrations.
- RFID Data Security: Best Practices and Challenges.
- Predictive Maintenance in Transportation through Big Data and RFID Sensors.
- Scalability Challenges in Big Data Analytics with Growing RFID Applications.
- The Potential of Cloud Computing in Handling Big Data from RFID Sources.

- Evolution of RFID Technologies: What it Means for Data Analytics.
- Data Visualization Techniques for RFID-Generated Big Data.
- The Future of Personalized Marketing with RFID and Big Data Insights.

Tentative schedule of Submissions, Reviewing, and Publication:

- Date of Article Submission Deadline - 20.03.2024
- Date of Authors Notification Date - 20.05.2024
- Revised Papers Due Date - 20.06.2024
- Final notification Date - 20.08.2024

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