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# Real-Time Industrial Data Analysis and Visualization

**Dr. P C Latane[1], Aditi Bhise[2], Harshada Biradar[3], Sakshi Marathe[4]**
Students, Department of Information Technology[1,2,3,]
Sinhgad Institute of Technology, Lonavala, Maharashtra, India

**Abstract:** *In the era of Industry 4.0, real-time data monitoring and analysis have become essential for enhancing operational efficiency and decision-making in industrial environments. This project focuses on the development of a comprehensive system for visualizing and analyzing real-time industrial data using a DHT11 sensor, which measures temperature and humidity. The collected data is transmitted and visualized through a dynamic web interface built on MyPHPAdmin, enabling users to access and interpret data seamlessly. The visualization aspect of the project aims to present the data in an intuitive format, allowing stakeholders to monitor environmental conditions effectively. Following the visualization phase, the data will undergo thorough analysis using advanced tools like Tableau and Excel, providing insights into patterns, trends, and anomalies in the industrial setting. This project not only demonstrates the integration of hardware and software technologies for real-time data management but also emphasizes the importance of data visualization and analysis in optimizing industrial processes. Ultimately, it serves as a foundation for further research and development in the field of industrial automation and data-driven decision-making.*

**Keywords:** Real – Time, Industrail.