National Level Poster Presentation
on
VISUALIZING CONNECTIVITY : IoT Poster EXPO-2024
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Title: IoT in Industry (IIoT)

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1.Introduction

Industrial Internet of Things (IIoT) refers to the interconnectedness of physical devices, machines, and systems through the internet, enabling data collection, analysis, and real-time control.

•**Increased Efficiency:** Optimizing processes and reducing downtime.

•**Enhanced Productivity:** Improving operational efficiency and output.

•**Cost Reduction:** Lowering costs through predictive maintenance and resource optimization.

2. Literature Review

Previously, authors suggested some research on IIoT in which Sarirekha et al. proposed a Novel Network Packet Broker (NPB) based anomaly detector in IIoT that was positioned at the egress port of the edge device of an IoT system. There results shown the accuracies of the anomaly detection using a set of ML classifiers and demonstrate the feasibility of the system for any vertical of IIoT.

3. Methodology

Data: IoT sensor data (e.g., temperature, humidity, vibration).

Design: Case study of a specific industrial application.

Analysis: Statistical methods, machine learning, time series analysis, and data visualization.

4. Findings

Findings: IIoT improves efficiency, reduces costs, and enhances decision-making.

Implications: IIoT can revolutionize industries and drive innovation**.**

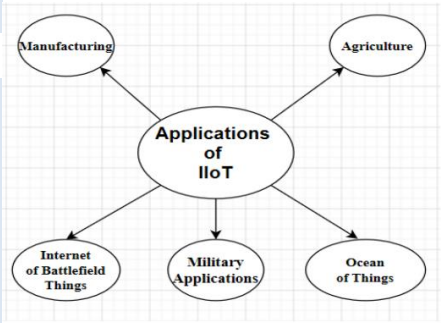
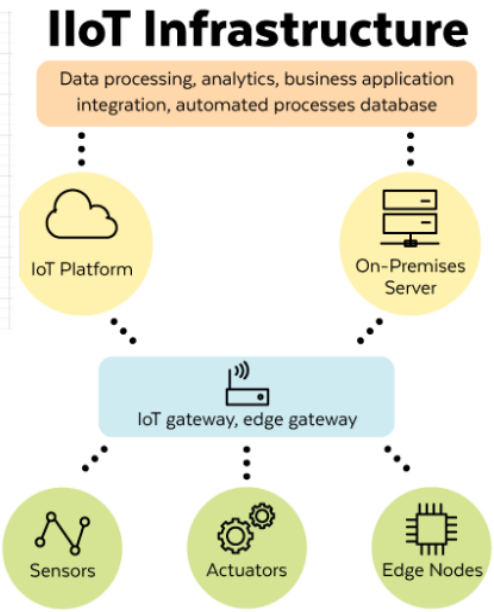


Figure 3: Applications of IIoT



5. Limitations & Challenges

Limitations: Data quality, security, and skilled workforce are key challenges.

Challenges: Challenges to consider, such as data security, interoperability, and the need for skilled workforce.

6. Conclusion

The IIoT is expected to transform how we live, work and play. The Industrial Internet of Things can have a bright and shiny future. From factory automation and automotive connectivity to wearable body sensors and home appliances, the IIoT is set to touch every facet of our lives. By leveraging IIoT technologies, businesses can gain valuable insights, improve decision-making, and stay competitive in the digital age.

References:
[1] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3603739
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[3]Sasirekha GVK, Annapoorna GH, Madhav Rao, Jyotsna Bapat, Debabrata Das, "ML-Augmented Network Packet Broker based Anomaly Detection at IIoT-Edge Egress Port", 2023 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), pp.1-6, 2023.
[4] Sivadas Chandra Sekaran, Hwa Jen Yap, Aiman Nabihah Abdul Aziz, Ahmad Syazwan Mohd Hisaburi, Chee Hau Tan, Mohd Faizzuan Mohamad, "IoT-Based Automation for Spray Painting in Aerospace Manufacturing", 2023 3rd International Conference on Robotics, Automation and Artificial Intelligence (RAAI), pp.266-274, 2023.