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(57) Abstract :

The present invention relates to an IoT-based device (100) for remote industrial equipment monitoring. The device integrates smart sensors (102), communication module (104), cloud platform (106), edge computing unit (112), analytics engine (114), user interface (108), and mobile application (110). The system provides real-time monitoring, predictive maintenance, and secure data transmission. Experimental validation confirmed improved fault detection accuracy and reduced downtime. The device (100) ensures reliability, scalability, and cost-efficiency for diverse industrial environments.

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