

ABSTRAK

Penelitian ini bertujuan untuk menciptakan Solusi inovatif dalam pengawasan dan pengelolaan lift penumpang di bangunan bertingkat melalui system yang berbasis Internet of Things (IoT). Dengan menggunakan teknologi terkini ini, tujuan utama penelitian adalah untuk meningkatkan efisiensi operasional, keamanan, dan keandalan lift penumpang dengan memungkinkan pemantauan dari jarak jauh oleh pengelola Gedung atau Perusahaan layanan lift.

Penerapan IoT dalam penelitian ini memberikan beberapa keuntungan. Pertama, system ini dapat mendeteksi masalah pada lift secara dini melalui pengumpulan data secara real-time tentang kecepatan, suhu, dan kinerja komponen lift. Hal ini memungkinkan identifikasi potensi masalah sebelum mencapai Tingkat yang kritis, mengurangi waktu downtime dan meningkatkan keandalan system secara keseluruhan. Selanjutnya, pengelola Gedung dapat memantau kinerja lift secara langsung melalui konektivitas IoT, memungkinkan respon cepat terhadap situasi darurat atau kerusakan, yang pada gilirannya meningkatkan keamanan pengguna Gedung.

Analisis data yang dihasilkan oleh system ini juga memberikan wawasan berharga untuk perawatan preventif, optimalisasi rute perjalanan lift, dan penghematan energi. Diharapkan bahwa efisiensi operasional yang ditingkatkan akan membawa manfaat jangka Panjang dalam pengelolaan sumber daya dan pengurangan biaya operasional.

Penelitian ini juga menyoroti beberapa aspek penting seperti pengembangan protocol keamanan yang kuat, standarisasi perangkat IoT, dan model bisnis yang berkelanjutan. Dalam kesimpulannya, implementasi dan pengujian Optimalisasi Sistem Pemantauan Keamanan Lift Berbasis IoT telah berhasil dilakukan.

Kata Kunci: Lift, IoT, pengenalan objek manusia,

ABSTRACT

The Remote Passenger Lift Monitoring System Based on IoT is a research aimed at bringing innovative solutions in the management and monitoring of passenger lifts in high-rise buildings. By leveraging Internet of Things (IoT) technology, this research designs a system that allows building managers or lift service companies to effectively monitor lift performance remotely. The main objective of this research is to enhance operational efficiency, safety, and reliability of passenger lifts.

The implementation of IoT in this context brings several significant benefits. Firstly, this system enables early detection of lift problems. Through connected sensors, data such as speed, temperature, and lift component performance are collected in real-time, allowing for the identification of potential issues before they reach critical levels. This not only reduces downtime but also enhances overall system reliability. Secondly, the system allows real-time monitoring of passenger lift performance. With IoT connectivity, building managers can access operational lift information directly, facilitating quick responses to emergencies or breakdowns. User safety is enhanced through more accurate monitoring and faster responses to technical issues.

Data analysis becomes an important aspect of this system. Data collected from passenger lifts are used to analyze usage patterns, component performance, and maintenance needs. The results of this analysis provide valuable insights for planning preventive maintenance, optimizing lift travel routes, and saving energy.

The improved operational efficiency is expected to bring long-term benefits in resource management and operational cost reduction. This research also highlights solutions such as the development of strong security protocols, standardization of IoT devices, and sustainable business models. In conclusion, the implementation and testing of the Optimization of IoT-Based Lift Security Monitoring System have been successfully conducted.

Keywords: elevator, IoT, human object recognition,