



Pulse-HR: Web Based Payroll System with Robust Cybersecurity

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ABSTRACT

Managing employee attendance and payroll remains a common challenge for small and medium-sized enterprises that still rely on manual recording and processing. In order to solve this problem, I contributed to the Pulse HR project by designing and implementing a web-based payroll system with distinct user roles for supervisors, IT administrators, regular employees, and human resources staff. Developing secure authentication and access control modules, creating a role-based dashboard, and putting in place tools for managing employee profiles, tracking attendance, requesting leaves of absence, and automatically creating paystubs were among my particular duties. A relational database and responsive web interfaces were integrated into the system's modular design to facilitate role-based information access and precise data processing.

Extensive testing and validation verified that the built modules increased payroll operations transparency, decreased the possibility of human error, and improved the accuracy and efficiency of routine HR functions. This work demonstrates how a role-based web system can contribute to better data management, streamlined HR processes, and improved operational control in small and medium-sized organizations.

Keywords: Web-Based Payroll System, Role-Based Access, Employee Management, Attendance Tracking, Human Resource Information System (HRIS)

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