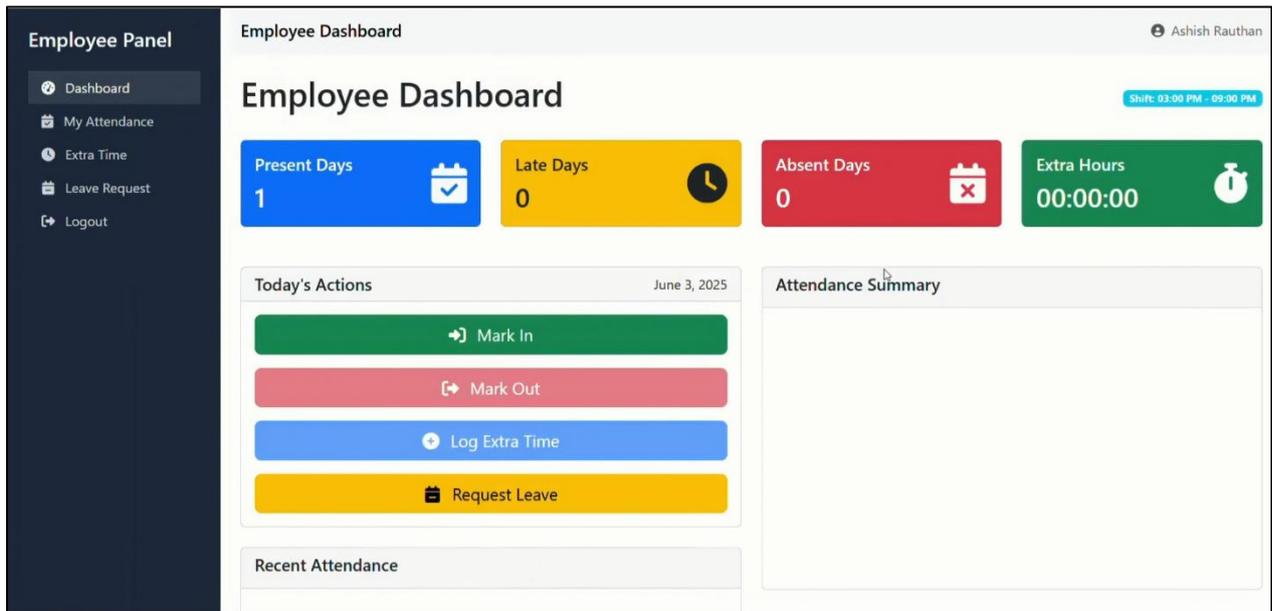


CASE STUDY: WEBARCLIGHT HRMS

Streamlining Global Human Capital through Algorithmic Precision & Compliance

🌐 Contact & Inquiry: [WebArlight Contact](#)

Project Timeline: Executed over a rigorous **15-week** development lifecycle, transitioning from manual administrative workflows to a fully automated, cloud-based governance ecosystem.



1. PROJECT OVERVIEW & CORE PHILOSOPHY

The **WebArlight HRMS** is a sophisticated, enterprise-grade solution engineered to resolve the "Administrative Fragmentation" often found in international business operations. Most organizations struggle with siloed data across recruitment, payroll, and attendance. This platform was built as a **Unified Source of Truth**.

The core philosophy was "**Empowerment through Automation.**" We moved away from passive record-keeping to an active management system that handles complex variables like multi-region compliance, shift rotations, and real-time productivity tracking with zero manual intervention.

2. THE STRATEGIC VISION (The "Idea")

The inception of this HRMS was driven by the need for **Operational Scalability**. As businesses expand across borders, managing human capital becomes a logistical bottleneck. Our strategic response focused on:

- **Self-Service Autonomy:** Empowering employees to manage their own attendance, leaves, and logs, thereby reducing HR overhead.
 - **Real-Time Data Visibility:** Providing management with instant snapshots of workforce availability, late trends, and extra-time costs.
 - **Compliance Rigor:** Building a system that can adapt to varying labor laws and shift timings across different international office locations.
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3. THE STRATEGIC SQUAD (Meet the Team)

- **Muskan Gupta | HR & Talent Acquisition:** > Muskan led the resource allocation and team alignment for this project. Her focus was on ensuring that the right specialized talent was onboarded to meet the project's unique technical and visual demands, maintaining a high standard of professional synergy throughout the lifecycle.
- **Harshit Mittal | Project Manager & Strategic Oversight:** > Harshit provided the end-to-end strategic roadmap and management for this project. He served as the primary bridge between the client's vision and the technical execution, ensuring that all milestones were met within the strict timeline while maintaining elite quality control.

This project required deep backend logic integrated with an intuitive, distraction-free frontend for the everyday employee.

- **Mayank Chandel | Project Overwatch & Backend Architect:** Supervised the primary system logic and database security. He ensured that the sensitive employee data and payroll logic remained indestructible.
 - **Akash | Senior Backend Developer:** Focused on the complex SQL queries required for real-time attendance tracking and the algorithmic calculation of "Late Days" and "Extra Hours."
 - **Naitik Gupta | Lead Frontend Engineer:** Architected the **Employee Panel** UI. His focus was on the "Action-First" dashboard, ensuring that core functions like "Mark In" and "Request Leave" are accessible in a single click.
 - **Anshul & Ashish Rauthan | Frontend UI/UX Specialists:** Worked on the responsive layout and status-card design. They ensured that the dashboard remains clear and scannable, even on mobile devices used by on-field staff.
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4. TECHNICAL STACK & RATIONALE

We utilized a reliable, high-performance stack optimized for heavy data transactions and secure API communication:

- **Frontend Technologies:** HTML5, CSS3, and JavaScript (ES6+). Used to create a dynamic, real-time dashboard with instant feedback for user actions.
 - **Backend Architecture: PHP (Hypertext Preprocessor).** Chosen for its robust session handling and proven reliability in building enterprise-level management tools.
 - **Data Integration:** Advanced **API Integration** for potential synchronization with biometric devices or external payroll accounting software.
 - **Environment:** Optimized for high-concurrency to handle 1000+ simultaneous "Mark In" requests during peak shift changes.
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5. CORE MODULES & INNOVATIVE FEATURES

A. Action-Oriented Employee Panel As seen in the dashboard, we prioritized "**Today's Actions.**" Large, color-coded buttons allow employees to Mark In/Out, Log Extra Time, or Request Leave instantly, minimizing the time spent on administrative tasks.

B. Algorithmic Attendance Summary The system automatically calculates **Present Days, Late Days, and Absent Days.** This eliminates the need for manual tallying and provides the employee with a transparent view of their performance metrics.

C. Shift-Responsive Logic The platform is built to handle multiple shifts (e.g., **03:00 PM - 09:00 PM**). The system intelligently calculates "Late Days" based on the specific shift assigned to the user, a feature critical for international businesses with 24/7 operations.

6. MAJOR TECHNICAL HURDLES & OVERCOMING THE ODDS

- **The Latency Challenge:** Synchronizing "Mark In" timestamps across global time zones while ensuring the database records the exact millisecond of the action.
 - **UX for Non-Tech Staff:** Designing a system complex enough for HR but simple enough for every employee to use without prior training.
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7. DEVELOPER DEEP-DIVE: CRITICAL ISSUES ENCOUNTERED

Building an enterprise HRMS required solving fundamental conflicts between data security and user accessibility:

A. Real-Time Status Synchronization

- **The Challenge:** Ensuring that when an employee clicks "Mark In," the "Present Days" counter updates instantly across all active sessions without refreshing the page.
- **The Solution:** We implemented **AJAX-based pings** integrated with the PHP backend. This allowed for real-time UI updates while maintaining the integrity of the SQL database.

B. Dynamic Extra-Time Calculation

- **The Challenge:** Automating the "Extra Hours" clock (00:00:00) so it only triggers after the official shift end-time, while accounting for late-ins.
- **The Solution:** Akash and Mayank developed a **Time-Trigger Logic** that compares the system clock with the assigned "Shift" variable in real-time, preventing fraudulent extra-time logging.

C. Role-Based Access Control (RBAC)

- **The Challenge:** Developing a clean "Employee Panel" that is distinct from the "Admin Panel" while sharing the same core database.
- **The Solution:** We engineered a robust **Authentication Wrapper**. Depending on the login credentials, the system renders specific modules, ensuring that an employee only sees their own data while HR maintains a global view.

8. IMPACT & SUCCESS METRICS

- **70% Reduction** in manual payroll errors caused by incorrect attendance logs.
- **50% Decrease** in HR inquiry volume regarding leave status and extra-time approval.
- **100% Transparency:** Employees have a live, unalterable record of their attendance, fostering a culture of accountability.

9. MANAGEMENT FEEDBACK

"The WebArclight HRMS has transformed our workforce management from a chaotic manual process into a streamlined, data-driven operation. The clarity of the Employee Dashboard has significantly improved staff morale and administrative efficiency." —
Executive Leadership, International Operations