








Kaung Sat Hein



Personal details

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Skills

Languages & Frameworks

PHP (Laravel), Node.js, JavaScript, TypeScript, React.js

Databases & Caching

MySQL, MongoDB, Redis

Cloud & DevOps

AWS, Docker, CI/CD

Core Strengths

System Design, API Architecture, RBAC, Workflow Systems, Performance Optimization

Engineering Notes

Authorization Boundaries and RBAC Design

<https://ksh-portfolio-nu.vercel.app/engineering-notes/authorization->

Profile

Backend-focused full stack developer specializing in **designing scalable, workflow-intensive business systems and high-performance backend architectures.**

Proven experience building and maintaining **HRMS, ATS, payroll, and internal platforms** supporting **100K+ users across multi-country environments**, with a strong focus on **data consistency, system reliability, and operational scalability.**

Skilled in **domain-driven design, RBAC systems, multi-level approval workflows, and complex business logic modeling**, enabling robust enterprise-grade applications. Strong background in **performance optimization (query design, indexing, caching), distributed system patterns, and API architecture**.

Experienced in integrating **AI-powered features, third-party services, and event-driven workflows**, delivering efficient, maintainable, and production-ready systems.

Employment

- Web Backend Developer (Trainee)** Oct 2023 - Jan 2024
Better HR, Yangon
- Web Backend Developer** Feb 2024 - Present
Better HR, Yangon

Selected Production Work

Better HR (HRMS Platform) Implementation

Designed and implemented scalable backend systems including:

- Expense management & multi-level approvals
- KPI tracking & performance evaluation
- Permission groups (RBAC)
- Indonesia payroll system

Additional enhancements across HR workflows and system performance

Key Contributions

- Designed **multi-level approval workflows** with role-based access control
- Optimized database queries and implemented **Redis caching** for high-load systems
- Built **Excel import/export pipelines** for large datasets
- Improved system reliability for **100K+ users across 8 countries**

Impact

- Reduced manual HR operations and improved workflow efficiency
- Improved system performance and scalability under high concurrency through query optimization and caching strategies

Engineering Case Study — Problem → Solution → Trade-offs → Impact
<https://ksh-portfolio-nu.vercel.app/projects/better-hr-hrms>

[boundaries-and-rbac-design](#)

System Design Tradeoffs

<https://ksh-portfolio-nu.vercel.app/engineering-notes/system-design-tradeoffs>

Database Indexing and Query Design

<https://ksh-portfolio-nu.vercel.app/engineering-notes/database-indexing-and-query-design>

Caching Strategies and Invalidation

<https://ksh-portfolio-nu.vercel.app/engineering-notes/caching-strategies-and-invalidation>

Audit Logs and Business Event Traceability

<https://ksh-portfolio-nu.vercel.app/engineering-notes/audit-logs-and-business-event-traceability>

Additional engineering notes (system design, caching, RBAC)

<https://ksh-portfolio-nu.vercel.app/engineering-notes>

Courses

OpenAI API for Python Developers Jan 2025

Explore a Career in SQL Development Aug 2024

Become a Programmer: Foundations Jul 2024

Docker Foundations Professional Certificate May 2024

Career Essentials in Software Development by Microsoft and LinkedIn May 2024

Introduction to Cloud Computing Apr 2024

Build Your Laravel Skills Apr 2024

Web Applications for Everybody Specialization

Application Tracking System (ATS)

Implementation

Built AI-powered CV upload and parsing pipeline with structured extraction (CV → JSON) and atomic candidate creation in ATS.

Key Contributions

- Designed **state-machine-based workflow transitions**
- Built **AI-powered CV** → **structured profile extraction**
- Implemented **atomic upload-to-candidate pipeline**
- Integrated ATS with internal HR systems

Impact

- Streamlined hiring workflow and reduced manual processing
- Improved data consistency and candidate tracking

Engineering Case Study — Problem → Solution → Trade-offs → Impact

<https://ksh-portfolio-nu.vercel.app/projects/application-tracking-system-ats>

Job Content Management System (CMS)

Implementation

Developed a modular CMS system supporting job pages, companies, and search optimization.

Key Contributions

- Built **modular content sections & dynamic job pages**
- Designed **complex filtering & search logic**
- Integrated **Google Indexing API**
- Optimized CMS endpoints for performance

Impact

- Improved content management efficiency
- Enhanced search visibility and system scalability

Engineering Case Study — Problem → Solution → Trade-offs → Impact

<https://ksh-portfolio-nu.vercel.app/projects/job-content-management-system-cms>

Additional Systems

- **Middleware Service** — SMS/Email OTP system across Thailand & Vietnam
<https://ksh-portfolio-nu.vercel.app/projects/middleware-service>
- **Customer Management System** — Multi-country lifecycle + Xero, Monday, Notion integration
<https://ksh-portfolio-nu.vercel.app/projects/customer-management-system-internal>
- **HR AI Chatbot Agent** — Backend APIs for KPI, ATS, and performance data
<https://ksh-portfolio-nu.vercel.app/projects/hr-ai-chatbot-agent>

Feature Highlights

ATS CV Upload & AI Profile Extraction

Designed async CV upload pipeline with file intake, AI extraction, profile creation, notifications, ATS synchronization; modeled structured applicant datasets.

System Design Deep Dive — Architecture & Implementation

<https://ksh-portfolio-nu.vercel.app/projects/ats-cv-upload-ai-profile-extraction>

Mar 2023

Meta Front-End Developer

Jun 2023

Google IT Support

Sep 2023

HTML, CSS, and Javascript for Web
Developers

Mar 2023

Expense Tracking System

Designed complete module scope including use cases, architecture, workflow, ERD, implementation plan, high-risk testing; modeled multi-level approval, paid-out handling, reclassification.

System Design Deep Dive — Architecture & Implementation

<https://ksh-portfolio-nu.vercel.app/projects/expense-tracking-system>

KPI Module

Designed full KPI module covering group management, target assignment, user tracking, exports, mobile visibility; structured setup, assignment, tracking, reporting.

System Design Deep Dive — Architecture & Implementation

<https://ksh-portfolio-nu.vercel.app/projects/kpi-module>

Permission Group

Designed group-based access control using department, position, location, status scope; separated permission definition, group mapping, runtime visibility evaluation.

System Design Deep Dive — Architecture & Implementation

<https://ksh-portfolio-nu.vercel.app/projects/permission-group>

Indonesia Payroll

Built payroll logic around annualized taxable income, personal/family relief, allowed deductions, progressive tax brackets, prior-tax reconciliation.

Payroll System Deep Dive — Tax Logic, Calculation & Reconciliation

<https://ksh-portfolio-nu.vercel.app/projects/indonesia-payroll>

Education

Bachelor of Engineering

West Yangon Technological University

Jan 2014 - Dec 2021

Diploma, Computer Science

NCC Education

Apr 2024 - Apr 2025