KHANT HMUE

Full Stack Web Developer

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Education

University Of Information Technology
B.C.Sc.High Performance Computing
[2016-2024]

Certificates

Information Technology Passport Examination (IP)

Fundamental Information Technology Engineers Examination (FE)

Tech Stacks

Frontend

- HTML5, CSS3, JavaScript (ES6+), TypeScript, jQuery, Bootstrap, Tailwind

Backend

- Node.js, C#, ASP.NET Core, Java (Spring Boot), Python (Django/Flask), PHP, (Laravel)

Databases

- MySQL, PostgreSQL, MongoDB, Firebase

DevOps & Tools

- Git, Azure DevOps, RESTful APIs
- Docker, Kubernetes (Foundational)

About Me

Full-stack developer with 2+ years of experience building modern web applications. I have hands-on experience with DevOps tools including Docker, Kubernetes, and CI/CD pipelines, along with foundational knowledge of cloud platforms (AWS, GCP, Azure) and Linux administration. My background in High Performance Computing (UIT Yangon) gives me strong problem-solving skills for scalable systems. Continuously expanding my skills, I'm passionate about bridging development and operations to build efficient, reliable applications.

Skills

• Full-stack web developer proficient in C#, JavaScript/TypeScript, Python, Java and PHP for building responsive, production-grade applications

• Experienced in architecting secure Progressive Web Apps (PWAs) and microservices with optimized performance

• Cloud-native developer with hands-on experience in AWS/GCP/Azure (load balancing, auto-scaling) and containerization (Docker/Kubernetes)

• Infrastructure expertise including VMware/ESXi virtualization and CI/CD pipeline implementation

• Enterprise solutions engineer skilled in Moodle LMS, CRM systems, SCCM, and Microsoft 365 deployments.

Experience

Full-Stack Developer
Next Innovations Co.ltd - Yangon **Sept 2024 - Present**

Specialized in developing AI-powered web applications for the Japanese market using Python (Django) and React, with advanced capabilities in LLM deployment and data transformation pipelines.

Technical Stack:

- Core: Python, JavaScript, Django, React
- AI/ML: OpenAI (Chatbot, RAG), Azure Foundry Model deployment
- Databases: MongoDB, Pinecone (vector/semantic search)
- APIs: Fincode Payment, Google Maps, TerraMap
- Data Processing: Web scraping transformation pipelines
- Task Management: Celery for periodic scheduling
- Notification: Firebase Push Notification
- DevOps: GitLab CI/CD, RBAC implementation

Key Contributions:

- Implemented TerraMap integration achieving 100% accuracy in Japanese address parsing (chome/district)
- Developed coordinates-based chome selection algorithm with the integration of Haversine Formula and Terramap API.
- Implemented dynamic pricing calendar with date-based algorithms (holiday/seasonal adjustments)
- Implemented Fincode payment gateway for handling user transactions securely
- Deployed OpenAI models via Azure Foundry for embedding and reasoning process.

- Implemented vector search capabilities using Pinecone DB/ MongoDB Vector Storage and created AI-powered semantic search functionality using vector embeddings.
- Built end-to-end data processing pipelines for transforming scraped raw data into structured formats

Junior Full-Stack Developer
Haulio - Singapore **May 2022 - June 2023**

As a junior full-stack developer at Haulio, I contributed to developing and maintaining web applications for the logistics industry, leveraging various technologies, message brokers, and microservices architecture.

Technical Stack
- Core: C#, JavaScript
- Frameworks: ASP.NET Core, Angular, Vue.js
- Real-Time: SignalR, Pusher.js
- Cloud Services: Azure Service Bus (Message Broker)
- Integrations: Payment Gateways (Stripe/Adyen), Third-party APIs

Key Contributions
- Collaborated with senior developers to design and implement scalable features, including real-time updates using SignalR and Pusher.js for live tracking and notifications.
- Integrated Azure Service Bus as a message broker, enabling asynchronous communication and reliable messaging between microservices across servers.
- Developed and integrated payment gateways to facilitate secure and seamless transactions.
- Debugged and resolved complex technical issues, improving application stability and user experience.
- Integrated third-party APIs to facilitate seamless data exchange with external systems.
- Worked with the UI/UX team to implement responsive designs, improving the user interface and satisfaction.
- Proficiently used version control systems for efficient code management and collaboration.
- My experience at Haulio provided hands-on expertise in building scalable web applications, implementing microservices architecture, integrating Azure Service Bus, and handling payment processing.

Junior System Engineer - Microsoft
BIM - Yangon **May 2024 - July 2024**

Gained hands-on experience in enterprise infrastructure management at a leading SI company, specializing in Microsoft ecosystems.

Technical Scope
- Cloud: Microsoft Azure administration, Office 365 deployment
- On-Prem: Windows Server configuration, Active Directory management
- Enterprise Tools: SCCM implementation, CRM system integration
- Licensing: Microsoft product licensing and compliance

Key Contributions
- Azure Infrastructure Implementation
  - Designed and deployed Azure VMs (Windows/Linux) via Portal/CLI/PowerShell (New-AzVM)
  - Configured virtual networks, NSGs, and storage accounts for hybrid environments
- Implemented Active Directory Setup in Window Server - Designed OU structure, configured Group Policies, and automated user provisioning using PowerShell scripts
- Deployed SCCM infrastructure on Window Server - Installed primary site server, configured client deployment, and implemented patch management for 200+ devices
- Executed full Microsoft 365 tenant migration - Managed user/data migration between tenants including:
  - PowerShell user permission mapping (Get-MsolUser, Set-MsolUserLicense)
  - Mail migration from Google Workspace to Exchange Online
  - Hybrid identity configuration with Azure AD Connect
- Developed Dynamics 365 on Window Server, workflows, and dashboards for sales automation
- Generated usage analytics - Generated Excel reports tracking license utilization and adoption metrics for client reviews

Projects

EcommerceX
July 2024 - August 2024
[MERN]

Developed a full-featured eCommerce platform utilizing the MERN stack and JWT authentication to manage products, users, and orders with a modern, responsive design.

- Frontend (MERN Stack): Created a dynamic user interface with React.js, featuring product listings, shopping cart management, and checkout functionality. Utilized React Router for seamless navigation and Redux for state management across the application.
- Backend (Node.js + Express.js): Implemented the backend with Node.js and Express.js, handling RESTful API requests for user authentication, product management, and order processing. Integrated JWT for secure user authentication and role-based access control.
- Database (MongoDB): Managed data storage for users, products, and orders with MongoDB, ensuring scalable and efficient NoSQL data management.
- Authentication: Implemented JWT-based authentication, securing routes and user sessions with token validation for both users and admins.

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Supply Chain Management
Feb 2024 - March 2024
[MERN + Hyperledger Fabric]

Developed a decentralized application (dApp) for supply chain management, integrating the MERN stack with Hyperledger Fabric blockchain technology for secure and transparent transactions.

- Frontend (MERN Stack): Utilized React.js for a dynamic and interactive user interface, enabling users to create accounts, manage products, and track supply chain operations. The frontend operates on port 3000, connecting seamlessly to the blockchain backend.
- Backend (Node.js + Hyperledger Fabric): Implemented the backend using Node.js and integrated it with Hyperledger Fabric, running on port 4000, to manage blockchain interactions.
- Hyperledger Fabric ensured decentralized and immutable tracking of product information and transaction history, enhancing transparency and security in the supply chain.
- Blockchain Integration: Designed smart contracts to handle core supply chain operations, such as product creation, order management, and product shipment. All transactions were recorded on the blockchain, enabling tamper-proof tracking and verification.

This project highlights the integration of blockchain with traditional web technologies to build a secure and transparent supply chain management system.

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UniNotify App
Aug 2023 - Sept 2023
[MERN + PWA]

Developed a Progressive Web Application (PWA) using the MERN stack (MongoDB, Express.js, React.js, Node.js), designed to integrate class schedules, weather updates, and real-time alerts for users by integrating with **Learning Management System(LMS)**.

The application architecture leveraged:

- React.js for a responsive frontend, with reusable components ensuring a seamless user experience across devices.
- Node.js and Express.js for the backend, enabling efficient API handling and real-time data synchronization.
- MongoDB for a NoSQL database, optimizing data storage for user profiles, schedules, and alert data.
- PWA Features: Enabled offline access and mobile-native functionality by implementing service workers, allowing the app to cache resources and provide a native app-like experience on mobile devices.
- Push Notifications: Integrated push notification services to deliver real-time updates, keeping users informed of schedule changes, weather alerts, and important notifications.

Focused on accessibility and user-friendly navigation, ensuring the app's core functionality remains effective in both online and offline environments.

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BookInfo
Nov 2021 - Dec 2021
[Laravel, Tailwind, Jquery, API and CRUD Functionality]

Developed a website utilizing the Google Books API to provide detailed book information and create a community for users to share their favorite books.

Project Architecture:

- Laravel: Managed both server-side logic, data handling, providing robust API integration and CRUD functionality, and frontend interface.
- Tailwind CSS: Enabled a modern, responsive design with customizable UI components.
- jQuery: Enhanced interactivity and dynamic content updates on the frontend.

Key Features:

- Google Books API Integration: Accessed comprehensive book data for search and display.
- CRUD Functionality: Implemented Create, Read, Update, and Delete operations for user-generated content.
- Community Sharing: Allowed users to contribute and discover favorite books within the community.

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Movie App
September 2021 - October 2021
[Laravel, Tailwind, Livewire]

Developed a movie information website with interactive search functionality and a vast movie database.

Project Architecture:

- Laravel: Managed both backend server-side logic and frontend UI, integrating movie data via API and handling CRUD operations.
- Tailwind CSS: Provided a responsive and modern design with utility-first styling.
- Livewire: Enabled dynamic, real-time updates and interactive components without full page reloads.

Key Features:

- Movie API Integration: Accessed and displayed extensive movie information.
- Interactive Search: Implemented real-time search and filtering for enhanced user experience.

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Covid-19 Info
Nov 2020 - Nov 2020
[Flask, Bootstrap]

Developed a web application to provide up-to-date COVID-19 information for any country, featuring:

Project Architecture:

- Flask: Handled backend server-side logic, API integration, and data processing for real-time COVID-19 statistics.
- Bootstrap: Delivered a responsive, user-friendly frontend design for seamless access and navigation across devices.

Key Features:

- Country-Specific Search: Allowed users to search for COVID-19 data by country.
- Global Status Visualization: Presented global statistics through both textual data and visual representations.

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Ferry Management System
Third Year Project
June 2019 - August 2019

Developed a comprehensive ferry management system designed to streamline operations and enhance user control.

Project Architecture:

- Backend: Managed server-side logic, including ferry scheduling, tracking, and notification features.
- Database: Handled data storage and retrieval for schedules, passenger information, and transactions.
- Frontend: Provided a user-friendly interface for ferry operators, passengers, and administrative staff.

Key Features:

- Scheduling and Tracking: Enabled ferry scheduling and real-time tracking for better management.
- Notifications: Automated notifications for schedule changes and updates to keep users informed.
- Payment Processing: Facilitated streamlined payment transactions for ferry services.

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GameDev
Second Year Project
August 2018 - October 2018
[PHP, JavaScript]

A project aimed at teaching the basics of canvas-based game development, featuring an online coding editor and interactive quizzes.

Project Architecture:

- PHP Backend: Managed user sessions and handled server-side logic for the online editor.
- JavaScript Canvas API: Used for creating and rendering game elements, including sample games like tic-tac-toe and minesweeper.
- Online Editor: Implemented for real-time coding and testing of canvas-based games.
- Quizzes: Developed to assess users' understanding of game development concepts.

Key Features:

- Interactive Learning: Provided practical examples and a coding environment for hands-on experience.
- Educational Quizzes: Tested and reinforced knowledge acquired through the lessons and sample games.

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More projects on Github => @Kh125

Projects - HPC

OpenNebula Architecture Lab Implementation
Feb 2024 - Mar 2024
[OpenNebula, VMware, Hardware Lab]

- Designed and implemented OpenNebula architecture in a hardware lab environment, leveraging VMware ESXi and containerization technologies.
- Set up and configured virtual infrastructure to simulate real-world cloud environments, ensuring efficient resource management and deployment automation.
- Gained hands-on experience in cloud orchestration, containerization, optimizing resource allocation, and managing virtualized data centers.
- Focused on providing scalable and flexible infrastructure solutions, supporting a variety of containerized applications and services within the lab setup.

Performance Evaluation with ApacheBench
Jul 2023 - Sep 2023

Conducted performance evaluation utilizing ApacheBench, assessing the efficiency and responsiveness of web servers through simulated load testing scenarios.
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Image Transformation AI
Jul 2023 - Sep 2023

Developed an image transformation AI using Python, PyTorch (Deep Learning Framework), and Generative Adversarial Network (Neural Network) to generate anime-style images from input images.
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Galera Cluster Implementation
HPC Cluster Projects
Feb 2020 - Mar 2020

Implement Galera Cluster for efficient database testing with 3 nodes, utilizing cluster control software for remote access and LAN network management. Orchestrated a multi-master setup, enabling seamless data synchronization across nodes and visualized cluster status through a user-friendly web UI.
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Zabbix Monitoring Tool Testing
Feb 2020 - Mar 2020

Set up and tested Zabbix monitoring for complete system control. Ensured smooth remote access, monitored the network, and provided real-time visualization for improved performance and reliability.
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HadoopPig Implementation
Feb 2020 - Mar 2020

Executed Zabbix monitoring setup, testing, and configuration for comprehensive system oversight. Ensured seamless remote access, network monitoring, and real-time visualization, optimizing performance and reliability.
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Academic Experiences and Researches

I authored for two papers in my academic years to show my interest and experiences related with the web development area.

‘Toward Context-Aware Notification Service in Universities’ - [2024]

As part of my academic contributions, I published a paper titled "Toward Context-Aware Notification Service in Universities," presented at **ICCA 2024**. This research focused on developing a notification service tailored to the dynamic needs of university environments, utilizing Progressive Web App (PWA) technology to enhance user engagement and accessibility. The paper explored how PWAs can provide a reliable, offline-capable, and responsive notification system that adapts to contextual factors such as location, schedule, and user preferences. By leveraging PWA features like push notifications and offline support, I demonstrated innovative approaches to improving communication efficiency and information dissemination within academic institutions.

‘Microservices vs Monoliths: A Comparative Analysis and Problem-Solving Approach in Web Development Area’ - [2024]

I authored the paper "Microservices vs Monoliths: A Comparative Analysis and Problem-Solving Approach in Web Development Area." This research provided an in-depth comparison of the pros and cons of microservice and monolithic architectures, emphasizing the benefits of microservices in terms of scalability, resilience, and maintainability. The study included extensive load tests and performance evaluations, implemented using the MERN stack for both architectural models. This work underscored my ability to analyze and implement modern software development paradigms, offering valuable insights into optimizing web application architecture.

Participation in Programming Contests

- **2018 ICPC Asia-Yangon Regional Programming Contest**: Competed in a prestigious regional programming contest, where I showcased my problem-solving skills and coding abilities in a competitive environment. [**Java Programming Language**]
- **2019 Myanmar Collegiate Programming Contest**: Participated in the national collegiate programming contest, demonstrating advanced algorithmic thinking and teamwork to tackle complex programming challenges. [**Java Programming Language**]

Kattis Problems
Java, Python

Successfully tackled programming challenges on Kattis, showcasing my problem-solving skills and proficiency in coding. This experience has not only strengthened my coding abilities but also instilled a practical understanding of algorithmic thinking in diverse scenarios.
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You can check my name in here.
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