Kyuesup (Louis) Byun
Senior Fullstack Python Engineer | Vue.js • Async APIs • AI-Powered SaaS Platforms
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PROFESSIONAL SUMMARY

Senior Fullstack Engineer with extensive experience designing, building, and operating production-grade SaaS platforms using Python (FastAPI, Flask) and Vue.js. Strong background in async API architecture, RESTful service design, and cloud-native deployments on AWS.

Experienced in delivering AI-powered customer-facing features including optimization engines, automated content generation, and intelligent workflow orchestration. Proven ability to own systems end-to-end — from architecture and implementation to deployment, monitoring, and production support.

CORE TECHNOLOGIES

Backend: Python (FastAPI, Flask), Node.js, REST APIs, Async Programming
Frontend: Vue.js, JavaScript, HTML/CSS
Cloud & DevOps: AWS EC2, Vultr, Vercel, Docker, Nginx, CI/CD Automation
Databases: PostgreSQL, MySQL, MariaDB, Redis
AI Integration: Gemini API, RAG workflows, AI-driven optimization engines
Operations: Logging, Monitoring, Production Support, RBAC, SLA Reliability

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PROFESSIONAL EXPERIENCE

Senior Software Engineer

Zinnotech (Samsung Austin Semiconductor) — Austin, TX
Sep 2024 – Present

- Designed and deployed automation and monitoring systems for semiconductor manufacturing operations.
- Built real-time diagnostics dashboards using Splunk SPL for log and event analysis.
- Developed Python and PowerShell automation integrated with backend services.
- Stabilized enterprise-critical internal tools through Windows system-level debugging (Win32 APIs).
- Ensured SLA compliance and operational reliability across secure VDI environments.

Tech: Python, PowerShell, Flask, Splunk, Windows/Linux

SOFTWARE ENGINEER / PLATFORM ARCHITECT

Austin, TX | Jan 2025 – Present

◆ **Mortgage AI Agent (Production AI Platform)**

AI-powered mortgage workflow and knowledge assistant for real estate professionals.
https://mortgage.aiswingx.com/

- Designed and deployed an AI mortgage advisory agent using LangFlow with multi-model orchestration (Gemini, Groq, Hugging Face Inference), Ollama embeddings for local RAG, and Supabase for persistence and auth.
- Designed and managed relational data in Supabase using SQL: created and maintained tables, schemas, and constraints for application and analytics use cases.
- Implemented structured prompt orchestration, context/session management, and tool-calling flows (web fetch, calculator) with validation and fallback handling for real-time financial Q&A.
- Architected scalable backend services with Python (LangFlow) and Node.js; deployed to production on cloud infrastructure with Supabase (SQL-backed data, auth) and optional Hugging Face Inference.
- Built customer-facing AI features for real-time analysis and workflow automation, using Ollama embedding models for cost-effective retrieval and Hugging Face Inference where cloud inference was required.

◆ **ai Swing™ Crypto – Automated Trading SaaS**

https://github.com/louisbyun/aiSwing

- Architected full-stack trading platform integrating Coinbase and Webull APIs.
- Designed a modular REST API backend using Python (FastAPI/Flask).
- Migrated multiple user-facing pages to Vue.js to modernize frontend architecture.
- Implemented role-based access control (RBAC) and subscription-based access tiers.
- Built automated AI-driven strategy optimization and analytics features.
- Deployed containerized services using Docker + Nginx on Linux cloud servers.

◆ **aiAgent – LLM-Based Agent Infrastructure**

https://github.com/louisbyun/aiAgent

- Engineered modular AI agent framework supporting RAG workflows and tool-calling.
- Integrated external APIs and database queries for real-time contextual responses.
- Built scalable orchestration layer for autonomous multi-step AI workflows.

◆ **ai-Gene X™ – DNA Trait Analysis Platform**

https://github.com/louisbyun/aiGenex

- Designed full-stack web application for genetic trait analysis.
- Built backend APIs and database schema for structured biological data.
- Implemented cloud deployment and CI/CD automation.

PREVIOUS EXPERIENCE

Senior Software Engineer / System Administrator

Orange Digit Inc. — Seoul, South Korea
Sep 2012 – Feb 2024

- Designed and deployed 40+ production systems including LMS, CMS, and manufacturing platforms.
- Built RESTful services using Python (Flask) in Dockerized Linux environments.
- Managed relational databases and cloud infrastructure.
- Led cross-functional teams (5–10 engineers).
- Owned production monitoring, deployment pipelines, and system reliability.

Earlier Career Highlights

- Technical Field Application Engineer — ST-Ericsson
- Senior Embedded Software Engineer — LG Electronics
- Quality Assurance Manager — SK

Strong background in systems engineering, diagnostics, and large-scale production environments.

EDUCATION

M.S. in Computer Engineering — Ajou University
B.S. in Computer Science — Ajou University

CERTIFICATIONS

DevOps on AWS Specialization — Amazon Web Services
Automation Anywhere Master RPA Professional
Splunk Search Expert 101
SQL for Data Science — UC Davis
Google IT System Administration