

Arthur Lau

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Profile Summary

A **result-driven** Software Engineer with 5+ years of experience, specializing in **React/Next** and **C#**, with a strong focus on **leadership**, **cross-functional collaboration** and **problem-solving**. **Adapted** to quickly learning new technologies and inspiring innovative ideas. Skilled in architecting customer-oriented **systems**, driving **project success** and aligning teams through **effective communication**. Passionate about **mentoring**, **fostering innovation** and continuously enhancing technical capabilities.

Experience

Senior Software Engineer, *IVM Tech Limited*

Aug 2023 – Apr 2025

A leading vending machine company, ranked #2 in the domestic market, serving 2k+ users and 500k+ customers.

- Spearheaded a team to introduce the weighted smart vending machine and architected a scalable, fast, secure self-pickup and self-checkout system with real-time admin control using **Next**, **Flutter** and **MSSQL**.
- Integrated a market-dominant contactless payment system into **Android OS**, with a custom app lifecycle and security measures to prevent spam clicking/false triggering by 80% based on user's feedback using **Java** and **Kotlin**.
- Constructed a real-time admin portal for 100k+ users on traditional vending machines managing \$1M+ monthly revenue using **NestJS** and **MSSQL**. Developed vending machine UI with **EJS**, **HTML**, **CSS** and **jQuery**.
- Configured and managed **AWS** EC2, CloudWatch, S3 and CloudFront file caching, resulting in a 60% reduction in network costs.
- Automated **CI/CD** deployments to **AWS** using **GitHub** Actions and **WSL** for seamless AWS deployment.
- Collaborated across **design** and **operation** teams with 30+ smart fridge partners by designing specifications to provide technical solutions over business needs, ensuring consistent interoperability.
- Led a team in **ERP** modernization, implementing **microservices** on a **.NET** server with **MSSQL**, revamping sales, procurement, and inventory modules, migrating from **EJS** to **Angular** for extensibility, and switching from **HTTPS** to **MQTT** for real-time communication, reducing latency by 50%.

Software Engineer, *Makeitfun Studio*

Jul 2022 – Aug 2023

A digital creative studio specializing in delivering fun experiences via various gamification forms with an average of 100k+ active users.

- Developed event websites serving 500k+ customers on **Next** and **Angular** with **SEO** and **GA**, boosting reach by 50%.
- Designed db schemas and business logic for 10+ projects using **Java**, **MongoDB**, **Postgres**, **docker** and **Kubernetes**.
- For virtual concerts, executed a POC on Mozilla Hubs, adding features to the open-source metaverse platform, such as a voting system using **React**, **Erlang**, **Elixir**, **Express**, and **WebRTC** (Mediasoup). Evaluated technical **feasibility** and cost-benefit analysis, recommending halting the project due to unsustainability.
- Programmed an **AR** app for a Disney-affiliated Studio with image and gesture recognition using **MediaPipe** and **Vuforia** in **Unity** and **C#**, rapidly acquiring proficiency in AR frameworks.

Software Engineer, *Flexsystem Limited*

Jun 2021 – Jul 2022

An international provider of enterprise management solutions for 2000+ clients in 30+ countries.

- Tailor-made an ERP system for 2M+ users using **React**, **Java**, and **ISAM**, reducing manual operation downtime by 60% by automating sales, inventory, and procurement modules.
- Created **RPA** by **UIPath** for **stress** and **unit** tests, reducing repetitive task execution time by 50%.

Projects

Reals

- Designed an **AIGC**-based **Flutter** app for itinerary dating planning and using **Python FastApi** and **Postgres**

Mozilla Hubs

- Derived from POC on Makeitfun Limited to further extend customized features like combined Hackweek Avatar Maker and add observer mode on a 3d Chinese chess game and **Dockerized** for microservice with **Kubernetes**.

Skills

Programming Languages: **C#**, JavaScript, TypeScript, Java, Python, Dart, Kotlin, PHP, Erlang, Elixir

Back-end Development: **.NET** Core, ASP.NET, Node.js, Express.js, RESTful APIs, Django, Flask, FastAPI, Spring Boot, GraphQL, Strapi

Front-end Development: React, Next, Nest, Flutter, Angular, Tailwind CSS, Material-UI (MUI), Bootstrap, Vue, Solid,

Database Management: PostgreSQL, MSSQL, SQLite, MongoDB, Redis, MySQL, DynamoDB, Firebase

DevOps & Cloud Platforms: Git, GitHub, GitLab, TortoiseSVN, Docker, Kubernetes, Jenkins, UIPath, AWS, Cloudflare, GCP.

Certificate

AWS Certified Solution Architect (In Progress)

Education

Chinese University of Hong Kong – Bachelor's Degree in Computer Science

Jun 2021

Hong Kong Community College – Associate's Degree in Information Technology

June 2017