Arthur Lau

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Profile Summary

A **result-driven** Software Engineer with 5+ years of experience, specializing in **React/Next.js** and **.NET**, 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 – Mar 2025

A leading vending machine company, ranked #2 in the domestic market, serving 2K+ users and 500K+ customers.
- Spearheaded the weighted smart vending machine with a team and architected a scalable system with fast, secure self-pickup and self-checkout experience with real-time admin control by **Next**, **Flutter** and **MSSQL**.
- Integrated a market-dominant contactless payment system into **Android OS,** with custom app lifecycle and security measures to prevent spam clicking/false triggering by 80% from 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 POS UI with **EJS**, **HTML**, **CSS** and **jQuery**.
- Configured and managed **AWS** EC2 with CloudWatch, S3 and implemented CloudFront file caching that cut network costs by 60%.
- Automated **CI/CD** deployments 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, implemented microservice on old **.NET** server with **MSSQL**, revamped sales, procurement and inventory module, migrated **EJS** to **Angular** for extensibility, **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 marketing and event websites serving 500k+ customers on **Next/React** with **SEO** and **Google Analytics**.
- Designed schemas and logic for 10+ projects using **ExpressJS**, **MongoDB**, **Postgres** and **dockerized** server with **Kubernetes**.
- Required for virtual concerts, a POC was executed on Mozilla Hubs, adding features in an open-source **metaverse** platform with a voting system using **React**, **Erlang**, **Elixir**, **Express**, and **WebRTC** (Mediasoup). Evaluated **feasibility** by assessing technical complexity, cost-benefit relation is unsustainable, thus recommended halting the project.
- Programmed an **AR** app for 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 **ERP** sale, inventory and procurement system for 2M+ users using **React, .Net and ISAM**.
- Created **RPA** for **stress** and **unit** tests, reducing repetitive task execution time by 50%.

For additional work experience, visit my portfolio.

Projects

Reals
- Designed an **AIGC**-based app for itinerary dating planning   and using **Python FastApi** as a server on **Postgres** and **Flutter** as a client

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.**

More projects can be found in the portfolio.

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, AWS, Cloudflare, Firebase

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