Johnny Chung

Software Developer | CEng.

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SUMMARY

Full-Stack Software Developer with a passion and experience in building **web** and **mobile** applications, **microservices** backends (Spring Boot, Node.js, Kafka), cloud solutions on AWS and self-hosting backend services on personal server. Skilled in React, Next.js, React Native, containerization (Docker, Kubernetes) and CI/CD. Chartered Engineer (UK) with a strong problem-solving mindset, combining engineering rigor with software creativity. Experienced in delivering end-to-end solutions, designing cloud architecture, advising on technical decisions, optimizing performance, and collaborating directly with clients in small agile teams to turn ideas into impactful products.

SKILLS

Programming: **C**, **C++**, **Java**, **JavaScript**, **TypeScript**, **Python**

Frontend: **React**, **Next.js, React Native, Expo, Redux, Zustand, TailwindCSS**, **MUI**, **shadcn/ui**, **D3.js**

Backend: **Spring Boot, Node.js, Express, Flask, Auth0, RESTful APIs**

Containerization, Orchestration & Streaming: **Apache Kafka, Docker, Kubernetes, Skaffold, Helm, NATS**

Database: **Oracle SQL**, **PostgreSQL**, **MongoDB, Redis, Firebase**

Cloud Platforms: **Azure, AWS (Solutions Architect – Associate)**

DevOps & CI/CD: **Jira, MS Project, GitHub Project**, **GitHub Actions**

WORK EXPERIENCE HIGHLIGHT

Freelance Developer

o **Chiau Wei Corp. Ltd.**   **(2024 – Current)**

Inventory Management Mobile & Web Full-stack App   - Live Demo

Tech: Expo React Native, Next.js, Redux, Zustand, Jest, AWS, Docker, TypeScript, TailwindCSS, Auth0, MongoDB, Github Actions

- *Launched a cross-platform mobile application (***Expo***) that reducing manual tracking by 40% through automation*
- **Built a web application** *with* **Next.js***, leveraging SSR and on-demand data synchronization to improve performance.*
- *Proactively suggested and implemented architecture improvements. Deployed backend services in* **Docker** *containers on* **AWS ECS** *for core systems, and* **migrated intermittent jobs** *to* **AWS Lambda + API Gateway***, improving scalability while reducing 24/7 hosting costs.*
- *Optimized existing backend architecture,* **consolidating services into ECS cluster***, cutting operational costs by almost 60%.*
- *Managed* **direct client interactions** *as a 3-person freelance team, translating business requirements into actionable features and ensuring rapid delivery and support.*

Employee Performance Tracking Mobile & Web Full-stack App   - Live Demo

Tech: Expo React Native, React, Redux, D3.js, Express.js, MongoDB, Auth0, AWS, GitHub Actions, Jest

- *Led the* **end-to-end development** *of* **mobile** *and* **web app** *in a freelance team, driving the project from concept to production designed UI/UX, advised on architecture, and ensured high-quality, maintainable code.*
- *Built* **iOS** *and* **Android** *apps with* **Expo React Native***, delivering a seamless cross-platform experience.*
- **Initiated** *and delivered a* **React** *admin dashboard with* **D3.js***, providing near real-time insights and enhancing decision-making. Adding measurable value to the project.*
- *Designed a secure, scalable backend on* **AWS** *with* **Express.js***,* **MongoDB***, and* **Auth0***, ensuring seamless authentication and access control.*
- *Implemented* **CI/CD pipelines** *with* **GitHub Actions***, integrating testing with* **Jest***, reducing deployment errors and accelerating releases.*

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o **Englobe Corp.** **(2 0 2 4)**

IoT Sound Monitoring Device Python App   - GitHub Link

Tech: Python, Raspberry Pi, Docker, GitHub Actions

- *Developed an **IoT** audio monitoring solution on **Raspberry Pi** using **Python**, containerized with **Docker** and automated deployments via **GitHub Actions**, reducing setup and release time for construction site monitoring.*

o **Crux Pro Ltd.** **(2 0 1 9 – 2 0 2 2)**

B2C Web Application

Tech: WordPress, LearnPress, HTML, CSS, PHP, JavaScript

- *Managed and optimized a **WordPress-based web app** with **LearnPress** and custom code, improving uptime, user experience, and form submission efficiency for e-commerce operations.*

OTHER WORK EXPERIENCE

o **Project Engineer & other Engineering Roles (ATAL Engineering Group, Arup)** **(2 0 1 2 – 2 0 2 2)**

- *Managed cross-functional teams and large-scale engineering projects under **waterfall model** and **NEC3** contracts*
- *Led in-house **BIM** and **IoT** development*
- *Developed and deployed various **VBA** scripts for performance checking, data analysis and technical calculation*

CERTIFICATION

o **AWS Certified Solutions Architect – Associate**

o **Chartered Engineer (IMechE UK)**

PORTFOLIO PROJECTS

o BookCrossing Web Platform Full-stack App   - Website   - GitHub Link

Tech: Next.js, shadcn/ui, Jest, Spring Boot, MongoDB, Kafka, Docker, Kubernetes, Skaffold, Helm, Auth0, Cloudflare tunnel, Stripe

- *Developed a book exchange platform using **Next.js** and **MongoDB**, enabling multilingual search and CRUD book listings.*
- *Deployed backend **microservices** with **Spring Boot** and **Kafka**, orchestrated via **Docker**, **Skaffold**, and **Helm**, improving scalability and resilience.*
- *Integrated **Auth0** for secure authentication with role-based access, reducing unauthorized access.*
- ***Self-hosted backend infrastructure** on an Ubuntu server with Docker and Helm, ensuring full control and cost efficiency.*

o Microservices Ticketing Full-stack App   - GitHub Link

Tech: Next.js, Docker, Kubernetes, NATS Streaming Server, Redis, Stripe API, GitHub Actions

- *Developed a scalable ticketing platform with microservices architecture with **Docker, Kubernetes & NATS**, improving modularity and fault isolation*
- *Built a **Next.js** frontend with server-side rendering (SSR), enhancing performance and SEO visibility*
- *Integrated **Stripe API** to enable secure and reliable payment processing for ticket purchases*
- *Implemented **CI/CD with GitHub Actions**, reducing deployment time and ensuring smoother, automated releases*

o Virtual Library Full-stack Web App   - Demo   - GitHub Link

Tech: React (Vite, TypeScript), TailwindCSS, Firebase, Express.js, MongoDB, Auth0, JWT, Jira, GitHub

- *Led a collaborative project to replicate real-world library workflows with the **MERN stack**, boosting team productivity through clear version control workflows in **Jira + GitHub Project***
- *Built a **React** app with Vite and TypeScript and deployed on **Firebase** for fast, scalable hosting*

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- *Developed a secure **RESTful API backend** with **Express.js + MongoDB**, supporting book inventory and user interactions*
- *Streamlined authentication and authorization using **Auth0 + JWT**, reducing manual account management*

o <u>Reversi Game Full-stack Web App</u> **-** <u>Live Demo</u>   - <u>GitHub Link</u>

Tech: Python, Flask, PyTorch, React, JavaScript, Docker, AWS, Gunicorn, Nginx, GitHub Actions

- *Engineered a full-stack Reversi game platform with an intelligent **AI** opponent, combining a **Flask-based REST API** with a **PyTorch machine learning model** for real-time gameplay.*
- *Deployed using **Dockerized** services on **AWS**, achieving high availability, scalability, and DDoS protection*
- *Integrated a **React** front-end with **CI/CD** pipeline automated via **GitHub Actions** and **AWS** S3 + CloudFront for global distribution*

o <u>Node.js Blog Service App</u> - <u>GitHub Link</u>

Tech: Node.js, Express, Handlebars, Bootstrap, PostgreSQL, MongoDB Atlas, Docker, GitHub Actions, Cyclic

- *Built a full-stack blog platform using **Express**, **Handlebars**, **PostgreSQL**, and **MongoDB**, enabling automated content and user management to improve efficiency and reliability.*

(…more in my <u>GitHub</u>)

EDUCATION

o **Computer Programming Diploma**

Seneca College

- *Object Oriented Programming, Data structures & algorithms: **C, C++, Python, JavaScript***
- *Database: **Oracle SQL, PostgreSQL, MongoDB, Schema Design, ERD, Data Normalization***
- *Web development: **HTML, CSS, Node.js, Express.js, PostgreSQL, MongoDB, AJAX, Bootstrap, RESTful API***
- *Testing & Quality Assurance: Test Plan, Scripts for **Unit, Functional & Integration Testing** with **Jest** & Visual Studio Debugger*
- *Project Management: **Jira,** understanding **SDLC**, knowledge in **Scrum** & **Kanban** for agile development*
- *Others: **Git, GitHub, CI/CD, Docker, Linux command** & **bash script, Markdown, Azure***

o **Cantek Cloud Computing Certificate**

Futuretek Academy

- *Collaborated with dev team to deploy Highly Available & Scalable app in **AWS** & **Azure***
- *Created **AD on-premise** and synchronize with **Microsoft Entra ID** in Azure*
- *Configured VMs, load balancer & VPC, VPN, deploy RDS MySQL database*

o **Master of Science in Engineering (Building Services)**

The University of Hong Kong

o **Bachelor of Mechanical Engineering**

The University of Hong Kong