

# Guochao XIE

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An Azure-certificated cloud architect with strong programming skills and in-depth knowledge on OS and Linux.

## EDUCATION EXPERIENCES

École Polytechnique Fédérale de Lausanne, Mater of Computer Science (Software Systems). GPA: 5.54/6.0. 09/2021 – 03/2024

- Related Courses: Database Systems, Data Visualization (**d3.js**), NLP (**GPT & LLM**), Systems for Data Science (**Spark**).

The Chinese University of Hong Kong, Shenzhen, BEng of Computer Science and Engineering. 09/2017 – 07/2021

- Presidential Award for Outstanding Students. Rank: top 1%. GPA: 3.827/4.0.
- Courses: Programming (**Python, C++, JAVA**), Database (**MySQL**), Cloud Computing (**AWS**), Blockchain Systems (**Go**).

University of California, Berkeley, Summer Program. GPA: 4.0/4.0. Operating System (**C, Go**), Game Theory. 06/2019 – 08/2019

## CERTIFICATIONS

Cloud: [Azure Administrator Associate \(AZ-104\)](#) & [Azure Solutions Architect Expert \(AZ-305\)](#) & [OCI Architect Associate \(1Z0-1072\)](#).

Kubernetes: [Certified Kubernetes Administrator \(CKA\)](#), [Certified Kubernetes Security Specialist \(CKS\)](#).

## WORKING EXPERIENCES

Oracle Labs, Research Assistant. Zürich, Switzerland 09/2023 – 03/2024

- **Context:** A Blackbox approach to generate build provenance for **SBOM, licensing** and **vulnerability audit**.
- Develop a framework of monitoring, **container** management and post-processing using **Python** and **Bash**. Monitor Linux container kernel and user-space events using **eBPF** and **Python BCC**. Build file-level provenance and generate **Software Bill of Materials** for complex build systems mixing multiple frameworks including Java's **Maven** and **Gradle** and Rust's **Cargo**.

Oracle Labs, Research Assistant. Zürich, Switzerland 07/2022 – 12/2022

- **Context 1:** Composition of **reference architectures** to support multiple **application patterns** on **Oracle Cloud**.
- Design a consistent **Terraform** composition solution using naming convention. Implement **Terraform** code parsing and generation using **Go**. Develop a **Terraform module** "flattening" tool to improve readability and customization using **Go**.
- **Context 2:** Shift-left (plan-phase) visualization and policy support for complex Terraform expressions.
- Design a solution to trace resource dependencies. Implement a **Terraform-core** patch in **Go**. The result outperforms **all plan-phase analysis** tools. Visualize the improved dependency inferring with a **VSCoDe Extension** using **JavaScript** and **SVG.js**.

Apartsa (Startup), CTO. Shenzhen, China 07/2020 – 06/2022

- Full stack lead on cloud-based web applications for an educational technical startup.
- **Graduation Album Project (2021):** A **JavaScript**-based mobile web application for Chinese graduates to exchange wishes. Utilize **React.js** for frontend implement a backend with **Serverless Python** and **MySQL** cluster deployed on **Tencent Cloud**. Successful marketing efforts resulted in **600,000** users in 5 days, while the operational monthly expenses are under **USD\$50**.

Shenzhen Research Institute of Big Data, Software Engineer Intern. Shenzhen, China 06/2018 – 08/2018

- **Context:** Real-time campus heatmap using Wi-Fi data to help students make better decisions for libraries and restaurants.
- Design and implement a mobile heatmap using **JavaScript** and **Fetch API**, effectively visualize user locations and the crowd density at various sports. Seamlessly integrate it into the WeChat platform, where it has been in service for 5 years.

## SKILLS

- Cloud Providers: Azure, Oracle Cloud Infrastructure, AWS, Cloudflare.
- Frameworks and Runtimes: GitHub Actions, JVM, Serverless, Docker, Podman, Kubernetes, React, Redis.
- Programming Languages: Bash, Terraform, Go, Python, C, C++, Java, JavaScript, SQL, eBPF, Linux kernel.
- Languages: Native: Chinese and Cantonese. Working proficiency (C1): English. Elementary: French.