

Guochao Xie

+41-762087445 | guochao.xie.077@gmail.com | linkedin.com/in/xieguochao | github.com/XieGuochao

Swiss B Permit — Authorized to work in Switzerland

EXPERIENCE

Oracle

Zurich, Switzerland

Member of Technical Staff

July 2024 – Present

- Oracle Database – Graal Cloud Service platform engineering, contributing to core infrastructure for cloud-native database and AI workloads.
- Led observability for serverless logging and metrics integration with OCI and Oracle Database, supporting over 1,000 customer applications per Linux host with high-available fault tolerance solution backed by Object Storage.
- Core contributor to the daemon container workload feature, implementing L3 network virtualization for non-HTTP microservices and AI workloads with direct IP connectivity.
- Improved team development velocity by 5× through reducing container image size by 90%, build pipeline time by 85%, and integration test time by 75% via shared base images, parallelization, and workflow redesign.
- Built distributed request tracing system using Java MDC and OpenTelemetry, enabling end-to-end request correlation across cloud-native microservices.
- Designed IAM and policy enforcement architecture for internal platform services, enabling fine-grained authorization and compliance across multi-tenant cloud infrastructure.
- Designed and implemented distributed request tracing across control plane and data plane using Java MDC and OpenTelemetry, enabling end-to-end correlation of requests across multi-layer control/data workflows.
- Built AI-assisted engineering workflows for feature development and operational automation using Java, GraalVM Native Image, and Python, improving development efficiency and release velocity.

Research Assistant and Master Thesis Student

Sep. 2023 – Mar. 2024

- Developed a generic Linux eBPF framework to trace software build processes and automatically generate Software Bill of Materials (SBOMs) without source code modifications. Implemented in Python BCC, supporting Maven, Gradle, Cargo, and GNU Make.

Research Assistant

July 2022 – Dec. 2022

- Designed a Terraform composition framework with automatic modularization and flattening in Go.
- Implemented dynamic taint analysis in Terraform runtime to support fine-grained resource dependencies in Go.
- Developed a Visual Studio Code Extension to visualize Terraform resource dependencies using JavaScript.

EDUCATION

EPFL

Lausanne, Switzerland

Master of Science in Computer Science, Software System Track. GPA: 5.54/6.0.

Sep. 2021 – Mar. 2024

The Chinese University of Hong Kong, Shenzhen

Shenzhen, China

Bachelor of Engineering in Computer Science and Engineering. GPA: 3.827/4.0 (rank 2).

Sep. 2017 – July 2021

University of California, Berkeley

Berkeley, CA, USA

Summer Program (Operating System, Game Theory). GPA: 4.0/4.0.

June 2019 – Aug. 2019

PUBLICATIONS

Guochao Xie, Yeh-Ching Chung. Bucket-Based Expiration Algorithm for improving eviction efficiency in in-memory key-value stores. *ACM MEMSYS '20*. doi:[10.1145/3422575.3422797](https://doi.org/10.1145/3422575.3422797).

TECHNICAL SKILLS AND CERTIFICATIONS

- **Programming Languages:** Java, Go, JavaScript, Python.
- **Infrastructure:** Terraform, Docker, Kubernetes, Jenkins.
- **Cloud:** Azure Administrator Associate (AZ-104), Azure Solutions Architect Expert (AZ-305), OCI Architect Associate (1Z0-1072).
- **Observability:** OpenTelemetry, Grafana.
- **Languages:** Chinese (native), English (professional), German (A2)