Thösam Norlha-Tsang, Software Engineer

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EDUCATION

ETH Zürich, *Master's Degree in Computer Science*
Focus on Machine Learning, Data Science, and Big Data

Sep. 2023 – Aug. 2026
Zürich, Switzerland

EPFL, *Bachelor's Degree in Computer Science*
Focus on Algorithms, Databases, Software Engineering

Sep. 2020 – Jul. 2023
Lausanne, Switzerland

PROFESSIONAL EXPERIENCE

Adnovum 🔗
Software Engineer Intern (full-time)

Feb. 2024 – Jul. 2024
Zurich, Switzerland

- Implemented **data ingestion pipelines** using the Strategy pattern, **APIs**, and **microservices** methods, while refactoring existing logic for maintainability.
- Ensured software quality through testing: unit, integration, and end-to-end tests (**OpenShift**) and participated in code reviews.
- **Automated CI/CD workflows** via **GitHub Actions**, updated dependencies/plugins, and handled deployments.
- **Actively collaborated in an Agile Scrum team** with UX designers, business analysts, software engineers, software architects, DevOps, and external partners; engaged directly with clients in bi-weekly meetings.
- Technologies used: **Java Spring Boot**, **MongoDB**, **OpenShift**, **GitHub Actions**, **Jira** and **Confluence**.
- Received a strong <u>recommendation letter</u> recognizing technical skill, independent work and team collaboration.

PROJECTS

ConnectOut, EPFL - ○ Github

Feb. 2023 – May 2023

- Served as Scrum Master for a portion of the project, **leading sprint planning**, discussions, and meetings to ensure timely delivery and **team coordination**.
- Developed an Android mobile app in **Java** using MVVM pattern and Firebase. Won **1st place for best application at EPFL**.
- Collaborated in a team of 6 software engineers using **Agile Scrum methodology** and **Test-Driven Development**.
- Maintained high code quality achieving an **A for maintainability** and **91% test coverage**, by participating in code reviews.

ACME Client for Automated Certificate Management, ETHZ

Nov. 2023

- Owned full development of an **ACMEv2 client** (**Python**) with **DNS/HTTP challenge servers** and automated certificate requests.
- Achieved **100% protocol compliance (RFC 8555)**, including revocation handling.
- Applied **multithreading** to handle concurrent services under strict **‹1 min runtime**.

Database System for Yelp Dataset, EPFL

Spring 2022

- Designed and normalized a **relational schema** (20+ tables, e.g., **Users**, **Businesses**, **Reviews**, **Attributes**) and **ETL pipeline**, ensuring data integrity and eliminating redundancy.
- Optimized multi-join analytical queries and **reduced runtime by 99%** through indexing and query plan analysis.

UniHousing

Sep. 2022 – Feb. 2023

- Built a cross-platform app for subletting rooms (**React Native**, **Node.js** + **MongoDB**).
- Designed APIs, database schema, and implemented frontend features using Figma.

TalkZone - 🔗 Website

Jun. 2022 – Dec. 2022

- Deployed social media platform (**Vue.js**, **Java Spring**, **MongoDB**) with modular MVC architecture.
- Implemented features including authentication, posts, and messaging.
- Collaborated closely with a teammate to maintain **consistent coding standards** and conduct **code reviews**.

SKILLS

Backend / Systems: Python, Java, Spring Boot, Scala, JavaScript, TypeScript, Node.js, SQL (PostgreSQL, MySQL), MongoDB, ETL, REST APIs, Microservices, Scaling, Docker, OpenShift, Kubernetes, Git

Frontend / Full-Stack: React, React Native, Redux, Next.js, Vue.js, HTML/CSS, Figma

Testing / DevOps: Test-Driven Development, Code Review (feedback) JUnit, CI/CD pipelines, Agile/Scrum, Version Control