OMAR HAMMOUD

omar.hammoudx@gmail.com

+41 78 206 30 53   —   Zurich, Switzerland

Portfolio Website   —   Github Profile   —   LinkedIn Profile

EDUCATION

Swiss Federal Institute of Technology (ETH Zürich)   *Zurich, Switzerland*
Master of Science in Computer Science, Data Management   *Sep. 2024 - Aug. 2026 (expected)*

Swiss Federal Institute of Technology Lausanne (EPFL)   *Lausanne, Switzerland*
Bachelor of Science in Computer Science   *Sep. 2021 - Aug. 2024*

- **Relevant Courses:** Algorithms, Big Data, Data Management Systems, Software Engineering, Cloud Computing Architecture, Multiprocessor Architecture, Network Security, System Security, Applied Cryptography, High Performance Computing, Machine Learning

EXPERIENCE

- **Teaching Assistant - ETH Zurich** – [ZURICH, SWITZERLAND]   *Feb. 2025 - Present*
Supported students in the Databases course by preparing and explaining exercises. Assisted participants in the Software Engineering course with project work through lab sessions and office hours.

- **Web Developer - Htech** – [BEIRUT, LEBANON]   *Jul. 2024 - Oct. 2024*
Began as an intern and later continued as a remote part-time developer, contributing to client projects from development to delivery using React (frontend) and .NET (backend).

- **Teaching Assistant - EPFL** – [LAUSANNE, SWITZERLAND]   *Sep. 2023 - Jun. 2024*
Supported students in the Computer Architecture and Digital Systems courses by clarifying complex concepts, guiding lab sessions, and helping them solve exercises.

PROJECTS

*Click on each project title to view more details.

- **FeedMe:** [KOTLIN] Ranked 2nd/18 for developing a mobile app with 6 classmates that lets users find, share, and create recipes, and more. Used Google Firebase for backend data management.

- **EventLoupe:** [TYPESCRIPT, PYTHON] Placed 6th/27 at VIScon Hackathon 2025 for developing a web app that boosts student attendance by centralizing events, highlighting friends' participation, and recommending events via a custom algorithm. Built with React, FastAPI, and SQLite.

- **LikingNodes:** [JAVASCRIPT, PYTHON] Web app using `D3.js` where users add and like nodes in live sessions. Built with React, FastAPI, and WebSockets; deployed on Vercel, Railway, and Neon.

- **JobsOnCloud:** Evaluated static and dynamic schedulers for memcached and PARSEC workloads on Google Cloud, optimizing batch completion while meeting tail latency service-level objectives.

- **OptTSVQ:** [C] Optimized an existing texture synthesis algorithm using loop unrolling, scalar replacement, memory aliasing, and SIMD translation. Profiled performance using VTune.

- **Bicycle Pathfinder:** [JAVA] A bicycle pathfinder with OpenStreetMap and JavaFX. Calculates the most efficient route using Dijkstra's algorithm (distance, elevation, bird's-eye view).

- **Snake:** [ASSEMBLY, VHDL] Snake minigame coded on a Gecko4Education Board. Programmed the FPGA to manage game logic, input handling, and screen output (LEDs).

SKILLS

- **Programming Languages:** Java, C/C++, Python, Go, JavaScript, Scala, Kotlin, Assembly, SQL, C#, TypeScript, HTML, CSS, VHDL, Verilog

- **Technologies:** Git, Docker, Kubernetes, CI/CD, React, FastAPI, Android Development, Google Cloud, PySpark, JSONiq, CUDA, Dynamic Programming

- **Hobbies:** Ski, Running, Golf, Gym, Tennis, Biking, Swimming

- **Languages:** Fluent in French, English and Arabic (native). Beginner in German