

OMAR HAMMOUD

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Zurich, Switzerland
Portfolio Website

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, Probability and Statistics, Machine Learning

EXPERIENCE

• **Teaching Assistant - ETH Zurich** — [ZURICH, SWITZERLAND] *Feb. 2025 - Present*
Supported students enrolled in the Databases course. Assisted students by preparing exercises, explaining the solutions and answering questions.

• **Software Developer - Htech** — [BEIRUT, LEBANON] *Jul. 2024 - Oct. 2024*
Worked as a Web Developer, first as an intern and later as a remote part-time, gaining experience in both frontend and backend development using React and .NET. Contributed to client projects.

• **Teaching Assistant - EPFL** — [LAUSANNE, SWITZERLAND] *Sep. 2023 - Jun. 2024*
Supported students enrolled in the Computer Architecture and Fundamentals of Digital Systems courses. Assisted students by clarifying concepts, guiding them for lab work and solving exercises.

PROJECTS

• **FeedMe:** [KOTLIN] Collaborated with 6 classmates to produce an Android mobile app that helps users find recipes by inputting ingredients: manually, scanned or image. Added social features like following friends and sharing recipes. Used Google Firebase as our data management backend.

• **LikingNodes:** [JAVASCRIPT, PYTHON] Developed a web application with an interactive graph-based frontend where users can add and like nodes. Focused on backend development using FastAPI to handle API requests and database interactions, and WebSockets to enable real-time local updates across active sessions. [Project Link](#)

• **Bicycle Pathfinder:** [JAVA] Developed an advanced bicycle finder for Switzerland using OpenStreetMap and JavaFX. Calculates the most efficient route between two or more points with Dijkstra's algorithm, considering distance, elevation and bird's-eye view.

• **Unix v6 Filesystem:** [C] A simplified version of the Unix v6 filesystem of the 1970s, constructed the skeleton of the system through a hierarchy of layers: sector, mount, inode and directory.

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

SKILLS

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

• **Technologies:** Git, Docker, CI/CD, ReactJS, Android Development, Pipelining, GPU Programming, Graph Theory, PySpark, JSONiq, Dynamic Programming, Parallel Programming

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

• **Languages:** Fluent in French, English and Arabic (native)