

# Ilyes Rouibi

Swiss Citizen

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## EDUCATION

### Kungliga Tekniska Högskolan (KTH)

Exchange student in Computer Science (EPFL academic exchange)

Stockholm, Sweden

Aug. 2025 – Jul. 2026

### École Polytechnique Fédérale de Lausanne (EPFL)

BSc in Computer Science (QS World #10 in Eng. & Tech.)

Lausanne, Switzerland

Sep. 2023 – Jul. 2026

- **Concentration:** Software Engineering
- **Relevant Coursework:** Web Development, Algorithms, Database Design, Object-Oriented Programming, Functional Programming, Computer Architecture, Artificial Intelligence, Machine Learning, Distributed Systems, Computer Security.

## EXPERIENCE

### Centre de Rencontres et d'Animation

Youth Leader

Lausanne, Switzerland

Oct. 2018 – Aug. 2025

- Engage with children and teenagers, from **6 to 17 years old**, during weekly open sessions and holiday camps.
- Design and facilitate recreational and educational activities tailored to group dynamics.

### Swiss Armed Forces

Infantryman, Squad Leader

Zurich, Switzerland

Jul. 2022 – Apr. 2023

- Completed **300 days** of full-time military service in demanding physical and mental conditions.
- Led a squad of **4 soldiers** during field exercises, managing decision-making in high-pressure environments.

## PROJECTS

### Portofolio Website



| React, Tailwind CSS, Web Development

Oct. 2025 – Dec. 2025

- Designed and developed a fully **responsive portfolio** from scratch using **React** and **Tailwind CSS**, deployed on **Vercel** for continuous delivery.
- Implemented modern **UI/UX** practices including dark mode and smooth animations.

### Document Management System



| Java, Docker, SQLite

Aug. 2025 – Oct. 2025

- Engineered a **Dockerized database system** in **Java** for critical hospital records by implementing and benchmarking **SQLite** vs. custom **TSV** backends.
- Designed a custom serialization pipeline where the **TSV** format demonstrated **12x** faster serialization and **38%** greater space efficiency than **CBOR**.
- Confirmed **sub-2ms** query performance for both storage backends after initialization.

### Distributed Key-Value Store



| C, Concurrency, Networking

Mar. 2025 – Jun. 2025

- Built a distributed key-value store in **C** inspired by **Amazon Dynamo**, supporting configurable **quorum-based replication** (**N, W, R**).
- Validated system resilience by designing a **peer-to-peer architecture** with virtual nodes and engineering testing tools for failure scenarios.

### Functional Connect 4



| Scala, Functional Programming, Web Development

Nov. 2024 – Dec. 2024

- Developed a multiplayer **web app** in **Scala**, applying **functional programming** principles to ensure state immutability.
- Enhanced user experience by implementing real-time game mechanics, turn timers, win detection and **persistent score tracking**.

### ChaCuN



| Java, JavaFX, Object-Oriented Programming

Feb. 2024 – Jun. 2024

- Replicated complex board game logic by building a multiplayer tile-based game from scratch in **Java** using **JavaFX** and advanced **object-oriented programming** patterns.
- Optimized game flow by designing algorithms for tile placement validation, player turns and **automated scoring logic**.

## TECHNICAL SKILLS

**Programming:** Java, Scala, C, C++, Python, SQL, JavaScript, React, HTML/CSS, Tailwind CSS, Assembly

**Developer Tools:** Docker, Git, GitHub, Linux/Shell, Maven, Firebase, VS Code, IntelliJ, CLion, Figma

**Languages:** French (Native), English (Advanced), German (Intermediate), Arabic (Basic)