# Ilyes Rouibi

Swiss Citizen

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## EDUCATION

**Kungliga Tekniska Högskolan (KTH)**  Stockholm, Sweden
*Exchange student in Computer Science (EPFL academic exchange)*  *Aug. 2025 – Jul. 2026*

**École Polytechnique Fédérale de Lausanne (EPFL)**  Lausanne, Switzerland
*BSc in Computer Science (QS World #10 in Eng. & Tech.)*  *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**  Lausanne, Switzerland
*Youth Leader*  *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**  Zurich, Switzerland
*Infantryman, Squad Leader*  *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

**Portoflio Website** ⌨ 🌐 | *React, Tailwind CSS, Web Dev.*  *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 Dev.*  *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)