Arnaud Fauconnet

📱 +41 78 894 30 44 ✉ arnaud.fauconnet.pro@gmail.com 🏠 Lugano, CH 💼 *arnaud* ⓖ *karma-riuk* 🌐 *karma-riuk.com*

Summary

Passionate about computer science and love to have lengthy conversations about it. Autonomous but also capable of communicating and handling people. Overall flexible, adaptable and always curious by new experiences.

Professional Experience

Reaserch Lab Assistant *(Università della Svizzera italiana)* **Lugano, CH** *08/2024 - 07/2025*
- Made a case study to optimize a pre-existing system using various method and benchmarks
- Refactored entire codebase of PhD student to make the system more modular and clean
- Translated a python library documentation and Next.js application from English to French

Teaching Assistant *(Università della Svizzera italiana)* **Lugano, CH** *09/2022 - 07/2025*
- Assisted in the Systems Programming, Programming Fundamentals 2 and Automata & Formal Languages courses
- Assisted teachers in grading assignments and exams, helped students with difficult concepts

UROP *(Undergraduate Research Opportunities Program)* **Lugano, CH** *07/2023 - 09/2023*
- Among the top 5 students who applied to assist on a research project
- Used event cameras and NeRFs for HDR reconstruction (computer graphics)
- Extended the C++ codebase of the project to support HDR simulations

Front-end Developer Internship *(TCPOS SA - Zucchetti Switzerland)* **Mendrisio, CH** *09/2022 - 12/2022*
- Created a website for users to see their expenses and top up their credit
- Built a React.js application from scratch and interacted with the Paypal API

Education

MSc Software and Data Engineering *Università della Svizzera italiana* **Lugano, CH** *09/2023 - Exp. 07/2025*
- Program language: English. GPA: 9.59/10
- Relevant Courses: Software Design & Modeling, Design 101, Visual Analytics, Advanced Java Programming, Advanced Networking

BSc Computer Science *Università della Svizzera italiana* **Lugano, CH** *09/2020 - 07/2023*
- Program language: English. GPA: 9.21/10 (Summa Cum Laude)

Skills

- **Programming:** Java, Pyhton, C++, C, Golang, Bash, Lua, R, Matlab
- **Web:** Javascript, Typescript, HTML, CSS, React, Vue, Node.js, Express, Spring Boot, SQL, NoSQL, MongoDB, PHP
- **Tools:** Git, NeoVim, ArchLinux, Latex, Docker
- **Data Visualization:** Pandas, Bokeh, Seaborn, Plotly
- **Development:** Test-driven Development, Agile, Scrum, CI/CD, DevOps
- **Soft Skills:** Presentation, Planning, Organized, Creative Problem-Solving, Teamwork, Active Listening, Adaptability

Projects

Stickfosh *github.com/karma-riuk/stickfosh* **Python, C++** *Side Project, 2025*
- Implemented from scratch a chess engine (AI that is able to play chess)
- Learned how to effectively use the MVC design pattern and investigated different optimizations to make the AIs faster at thinking

Ray Tracer *github.com/karma-riuk/ray-tracer* **C++** *Side Project, 2024*
- Followed the book *Ray Tracing in One Weekend* by Peter Shirley
- Extended the project to support more features, such as triangles and multithreading for a 4x speedup

Maze Solver *github.com/karma-riuk/maze-solver-go* **Go** *Side Project, 2023*
- A maze solver which implements various path-finding algorithms
- Learned about well structuring and design software, with unit-testing and dependency injection

From Flying Balls to Colliding Polygons *github.com/karma-riuk/flying-balls* **C++** *Bachelor Thesis, 2023*
- Expansion of an existing physics engine
- Learned about physics concepts and how to represent them efficiently in code

Languages

- **English** [Native] • **French** [Native] • **Italian** [Native] • **German** [Conversational]

Hobbies

Theatre - Open source contributions - Shooting sports - Sewing - Chess - Basketball - Bouldering