

# Arnaud Fauconnet

Computer Science Graduate

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## 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

**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

**Teaching Assistant** (*Università della Svizzera italiana*) **Lugano, CH** 09/2022 - 07/2025

- Assisted in the Systems Programming and Programming Fundamentals 2 courses
- Assisted teachers in grading assignments and exams, helped students with difficult concepts
- Translated a python library documentation and Next.js application from English to French

**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, Python, 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