

Mila Lüscher

Fullstack Developer, MSc ETH

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Nationality: Swiss, American

PROJECTS & THESES

PyCmap - A Matplotlib colormap online tool

Zurich, Switzerland

Fall 2024

[PyCmap](#)

- Designed and implemented the PyCmap website using fast HTML, delivering a responsive and user-friendly platform now available online. Showcased skills in web development, design, and deployment.
- Technologies used: fast HTML, CSS

Flatland Escape

Zurich, Switzerland

July 2024

[Flatland Escape](#)

- Designed and developed a minigame in Godot, including conceptualizing the idea, creating a development roadmap, implementing features, and delivering a fully functional game. Demonstrated skills in project planning, game design, and programming.
- Technologies used: Godot, GDScript, Aseprite

Minigame a Month - February 2024 Game Jam

Zurich, Switzerland

February 2024

[Revamp My Space](#)

- Participated in the Minigame A Month - February 2024 Jam with the theme “space,” where I developed an interior design puzzle game called “Revamp My Space”.
- Technologies used: Godot, GDScript, Aseprite

Master Thesis

Zurich, Switzerland

20.09.2022 - 27.03.2023

[Convergence Maps With Denoising Diffusion Probabilistic Models](#)

- Utilized deep learning techniques to generate weak-lensing dark matter density maps with a conditional denoising diffusion probabilistic model, and compared the results to those produced with a Wasserstein GAN.
- Technologies used: Python, Tensorflow, PyTorch, Bash, Slurm

Semester Project

Zurich, Switzerland

01.09.2021 - 01.03.2022

[The Formation of Stellar Clusters at High Redshifts in Cosmological Simulations](#)

- Analyzed globular clusters in high-redshift galaxies simulated with the GIZMO code and the FIRE-2 feedback model.
- Technologies used: Python, Bash, Slurm

Bachelor Thesis

Zurich, Switzerland

01.09.2020 - 01.08.2021

[The Impact of Supermassive Black Holes on Galaxy Morphology](#)

- Simulated galaxies using the N-body, hydrodynamical code RAMSES on the CSCS supercomputer to test the impact of implementing supermassive black holes on galaxy morphology.
- Technologies used: Python, Fortran 90, Bash, Slurm

EDUCATION

ETH Zurich

Zurich, Switzerland

2021–2023

Master in Physics (90 ECTS)

- Physics Coursework: General Relativity, Astrophysics II, Astrophysics III, Quantum Science with Superconducting Circuits, Computational Physics, Advanced Computational Methods in Astrophysics
- Additional Coursework: Machine Learning for the Sciences, Entrepreneurial Risks

- Additional Coursework: Programming in C++, Data Analysis, Scientific Computing

WORK EXPERIENCE

Cando Image Internship in Software and Data Engineering	Winterthur, Switzerland 01.09.2024 - Present
– Worked with customers to build a web application, implementing frontend tickets in React with TypeScript, styled using Tailwind CSS and SCSS, while adhering to Agile and Scrum workflows.	
– Assisted in building an AI-driven app, implementing frontend features and ensuring the app's readiness for presentation during a business pitch	
ZHAW, Institute of Data Analysis and Process Design Research Assistant in Machine Learning for Complex Industrial Systems	Winterthur, Switzerland 15.08.2023 - Present
– Created an optimized cleaning schedule for photovoltaic power plants to reduce costs and maximize power production.	
– Contributed to the development of an AI fault detection system to identify shading and tracker faults in photovoltaic plants.	
– Conducted data cleaning and initial data exploration for battery performance data.	
– Technologies used: Python, Tensorflow, Pytorch, Pandas, Git, Docker	
University of Zurich, Faculty of Medicine Support Crew	Zurich, Switzerland 01.09.2020 - 15.08.2023
– Managed reservations and operations of the skills lab rooms.	
– Assisted with lectures and provided support during exam administration.	
– Pixelated lecture podcasts for confidentiality.	
– Assisted in the dissertation office.	
University of Zurich Teaching Assistant	Zurich, Switzerland 01.02.2020 - 31.08.2020
– Leading exercises classes in "Physics for Life Sciences"	

CERTIFICATES

Codecademy Front-End Engineer Course (115 hours)	Online Spring 2024
– Coursework: Web Foundations, Improved Styling with CSS, Building Interactive Websites, Front-End Development	
Udemy Unreal Engine 5 C++ Developer: Learn C++ & Make Video Games	Online Winter 2023
– In this course, I learned to develop games in Unreal Engine 5 using C++, focusing on object-oriented programming, game design principles, AI behavior programming, clean code practices, the use of Blueprint versus C++, and modern game development technologies and techniques.	

TECHNICAL SKILLS

- HTML, CSS, JavaScript, React, Typescript, Tailwind, fast HTML, Git
- Python, Pandas, Pytorch, Tensorflow
- GDScript, Godot 4, Unreal Engine 5, C++ (basics)
- LaTex, Bash, Slurm, Swift (basics), Julia (basics)