

Michel Zeller

Software Engineer — Zurich, Switzerland



About

Software Engineer with strong foundations in 3D computer vision & ML. Engineered data processing and neural rendering pipelines at meshcapade, developed production-ready CLI tools that replaced costly visualization software at MeteoSwiss, and built full-stack solutions for Logiblox's AI no-code platform.

My MSc journey at ETH Zurich, coupled with 5+ years of Python development, has equipped me with versatile problem-solving skills that I'm eager to apply to new domains and challenges.

Employment

meshcapade R&D

Oct. 2024 — Mar. 2025

ML Engineer (Intern)

At meshcapade, I built a robust data pipeline to regress human + object poses from RGB video & optimize their relative position in a canonical space. This then served as input to the 3DGS-based training pipeline to efficiently (& explicitly) learn the scene's appearance models to gain a spatial understanding of the human-object interaction.

Tech-Stack: Python, PyTorch, Rust, AWS

LOGIBLOX AG

Apr. 2022 — Dec. 2023

Software Engineer (Full-Stack)

I mainly researched and implemented software solutions, i.e. for the in-house graph compiler, the data-science or AI modules as well as the UI of the platform. [\[Reference Letter\]](#)

Tech-Stack: Python, TypeScript, HTML/CSS, Angular, Flask, Firebase, SQL

MeteoSwiss Dep. Analysis & Numerical Predictions

Sept. 2021 — Mar. 2022

Software Engineer (Civil Service)

My main task at MeteoSwiss was developing CLI tools to visualise their global air-trajectory data using Python. Ultimately, my work replaced the previously used, pricey software and is still in production ([code](#)). Hereby I concluded my civil service duties. [\[Reference Letter\]](#)

Tech-Stack: Python, Linux, Bash, Git

Education

ETH Zurich, D-MAVT

Sept. 2022 — Sept. 2024

Master of Science in Mechanical Engineering

Research-centred program with a focus on deep learning for computer vision and robotics

Final Thesis: Reconstructing Hand-Object Interactions in 3D from Monocular Video with 3DGS

ETH Zurich, D-MAVT

Sept. 2017 — Sept. 2021

Bachelor of Science in Mechanical Engineering

Comprehensive program providing strong foundations in mathematics, physics, and engineering principles with a focus on Energy, Flows & Processes.

Final Thesis: Drone Tracking in Challenging Conditions

Selected Projects

These projects were implemented using PyTorch in Python, developed on remote Linux servers, and maintained with Git for version control/collaboration and Docker for containerization.

Understanding Human-Object Interactions in more Detail [\[Github, Report\]](#) meshcapade

- Model human-object interactions in 3D using from monocular RGB
- Neural Rendering with 3D Gaussian Splatting
- build complex data processing pipeline to initialize Gaussian models

HOLD-GS: Reconstructing Hand-Object Interactions in 3D from Monocular Video using Gaussian Splatting [\[Github, Report\]](#) AIT

- Model hand-object interactions in 3D using from monocular RGB
- Extending HOLD with 3D Gaussian Splatting for real-time rendering

Adaptive Visual Pose Estimation for Multi-Robot Registration [\[Github, Report\]](#) CVG

- Deep Learning in Computer Vision, Dense Tracking
- Continual Learning & Adaptive Geometry for Pose Estimation

Monocular Pose Estimation for Human-Robot Co-Localization [\[Github, Report\]](#) CVG

- Creating a modular synthetic data pipeline using BlenderProc2 which could subsequently be used in numerous other projects in the lab as well
- Adapting OnePose++ to train a SPOT pose estimation model

Combining 3D Scene Reconstruction & Human Motion Capture [\[Github, Report\]](#) VLG

- Human Motion Capture using EasyMocap; SMPL
- Novel view synthesis from RGB videos
- 3D Scene Reconstruction using Nerfstudio

Skills

Proficient	Python, PyTorch, Bash, Git, Linux, OpenCV, NumPy, SciPy, L ^A T _E X
Moderate	VIM, Blender, Docker, Adobe CS, DaVinci Resolve
Prior Experience	C++, MATLAB, RUST, TypeScript, Julia, HTML/CSS, Angular, REST, SQL
Languages	Swiss-German (Native), English (C2), French (Read/Write)

Thank you for your time.