Eric Mink
Switzerland

*I am a curious, independent, and reliable
ETH graduate, looking for a job in
Computer Vision / Software Eng. / Research.*

Education

2020 – 2023	ETH Zürich, **Master of Computer Science**, with a focus on **Computer Vision**
2023	Master's thesis "A Learned Style Representation".
	Research on **Style Transfer**, in collaboration with Disney Research.
2020	Semester thesis "Flexible Image Enhancement" with Disney Research.
	Deinterlacing with the use of Machine Learning.
2015 – 2019	ETH Zürich, Bachelor of Computer Science (BSc ETH CS)

Work Experience

2021 Sep - Dec	Student **Teaching Assistant** for the *Information Security Lab* (Master's Level in CS)
2019 – 2020 July	Zivildienstleistender Klassenassistenz at Schule Russikon (mandatory civil services)
2019 Mar – May	**Software Engineering** Internship at MP Technology AG (Xamarin, C#)
2019 Jan – Feb	Software-Engineering Internship at Ubique Innovation AG (Android)
2018	Bachelor's Thesis in collaboration with Autoform in the field of Computer Vision
2014 – 2017	Webmaster for the local political party "FDP-Russikon"

Background

2020 – Present	Founding member of the CTF team "Organizers". **1st Place worldwide** in 2022. We have regularly been invited to international Cybersecurity competitions and were granted a National Interest Exception by the U.S. Embassy. I have been involved in organizational tasks, infrastructure, in- and external communications, and mainly work on the challenge category "Misc".
2023	In the **top 7% users on stackoverflow**.com (all-time), top 13% on askubuntu.com.
2020 – Present	CTF-Committee Member. "Flagbot" was the best team in Switzerland in 2020 and the second-best after "Organizers" in 2021. I authored CTF challenges to teach beginners in our Monday Meetings.
2009	Started learning how to code in C# as a Hobby

Volunteering

2019 – 2021	As certified "J+S-Coach", I supervised the organizational committee of youth camps (CEVI Herbstlager) to help them with safety, compliance, and preparing a fun, educational, and sportive week.
2018 – 2023	Member, and for a semester President, of the Design Committee of the VIS.
2017	Certifications: "J+S **Lagerleiter** LS/T", "J+S Jugendsport LS/T", "J+S Kindersport"
	Official recognition as group leader and camp organizer in youth organizations
2012 – 2021	Voluntary group leader at YMCA youth organization (CEVI)
	Main responsible for organizing wastepaper collections, print communications, and selling self-made braids on Mother's Day in collaboration with a Bakery.
	Acquired skills: teamwork, organizational skills, and self-management

Languages

Fluent: German, English, Swiss German   Almost fluent: French   Beginner: Russian (A2.2)

Programming Languages
I have some experience in Java, C#, Python, Rust, C, Haskell, JavaScript, C++, Kotlin, Godot, Google Dart, Eiffel, Assembly, MySQL, Excel VBA and more. Of the mentioned languages, I prefer Python, Rust, and C# over the others.

Recent Free-time Projects
I have created many CTF challenges for Flagbot training sessions. Aside from that and from playing CTF, I enjoy creating in my free time. Most recently, I spent a week of vacation with a friend implementing custom lighting in Godot to obtain shadows the player can physically interact with.

Another project is MineDeeper, a C#/Unity program that we created on a 31-work-hours-weekend. It's a deterministically solvable Minesweeper in 3D, and it can give you hints that not only tell you what you can find out, but also by what logic you could get there.

I wrote an MS Excel VBA Macro several years ago that worked around the shortcomings of the CEVI(YMCA) database. To adapt to new requirements, I completely rewrote it in Rust in 2019. The new version is intuitive to use, reports and fixes malformed database content, merges addresses from the same household and generates a PDF of envelopes that also contain valuable information to speed up the team that fills said envelopes manually.

A Telegram bot I wrote in python allowed you to search a huge compilation of leaked credentials. Enter your e-mail address, possibly get your password in clear text. It had over 24'000 unique users.

Brotkeys.js is a Javascript library that makes it easy to feature keyboard navigation in a Vimium-like way on your website instead of as a browser addon.

I spent a lot of my time in 2020 setting up my ubuntu laptop with encrypted ZFS root and fixing its many fascinating issues. The speakers used to work only if I rebooted from windows to Linux without a full shutdown, for example. And DNS resolution failed only when I had previously locked the laptop while leaving the house.

Educational Projects at ETH
Several exercises for my university courses, an android version of the game UNO for *Distributed Systems*, Sobel & Canny Edge Detection for *Visual Computing*, and some code optimization tasks for *High Performance Computing*. I also wrote a compiler for a subset of the Java language for *Compiler Design* and some cross-validation for finding the best parameters in *Intro To Machine Learning*.

Information Security Lab covered the breadth of the field, including Elliptic Curve Cryptography, implementing TLS 1.3, Cryptographic Reductions, and Software Security.
In *Algolab* I got familiar with the CGAL and Boost c++ libraries by solving competitive algorithmic problems focused on runtime and correctness.

In *Mathematical foundations of Computer Graphics and Vision* I implemented object tracking, RANSAC, Similarity Image Deformation, Super Resolution, and Image Recoloring by Optimal Transport. In *Shape Modeling* I constructed meshes from implicit surfaces, smoothed them, minimized texture distortion, and deformed them in real-time. For the *3D Vision* project, we sped up Dense SLAM Reconstruction by using semantic properties and for another small semester project I researched the use of Spatial Relations for Object Discovery.

My Semester Project on Neural Video Deinterlacing outperformed State of the Art and my Master Thesis on Image Style Transfer resulted in an interpolable latent Style Space that preserves Content.