



Alexander Schoch

Process/Chemical Engineer

Web Developer

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Languages

- German
- English
- French

Software Skills

- Python
- R
- Julia
- bash
- C/C++
- MPI/OpenMP
- git / GitLab
- GNU/Linux
- LaTeX / typst
- Blender
- GIMP
- Inkscape
- Aspen Plus

Theses

Master Thesis

Development of accessible bayesian optimization software for experiment planning in general chemical reaction optimization

Semester Project

Process Simulation and techno-economic Assessment of NO_x-to-Ammonia in Ammonia powered Container Ships

Education

- 2021 – 2025 Master of Process Engineering 8092 Zürich
D-MAVT, ETH Zürich
- 2017 – 2021 Bachelor of Chemical Engineering 8092 Zürich
D-CHAB, ETH Zürich

Work experience

- 2024 – today **Web Developer** Self-Employed
For ETH Zurich, Unbound Potential GmbH and expert Frank GmbH, I developed web applications (Next.js / Laravel) for process automation given the specification of my clients. This includes the initial development, bug fixing, new features, documentation and support.
- 2023 – 2024 **Membrane Engineer** Novamem AG
In order to try and produce a fluorine-free venting membrane, I iterated a recipe to improve air flow and water entry pressure by varying several parameters, producing the membrane and then measuring it.
- 2021 – 2022 **Lab Assistant** D-CHAB, ETH Zurich
Every week, I supervised a new group of students for the experiments "Vapour Pressure" and "Boiling Diagrams", in which the students gain a deeper understanding of the Clausius-Clapeyron equation and the Wilson model. I taught them how to evaluate their data using the R language and how to write lab reports.
- 2021 – 2023 **PVK Assistant** VCS, VSETH
For the first semester students of the chemical students association, I taught a 12 hour interactive course in informatics, specifically important concepts and inner workings of a computer, as well as the UNIX terminal and the C++ programming language.
- 2020 – 2020 **Exercise Assistant for Informatik I** D-CHAB, ETH Zurich
First semester Students of chemistry, chemical engineering and interdisciplinary sciences visit the Informatics I course. For this, they have to solve programming exercise in C++ and bash and visit an exercise session for this every week. This required a good understanding of both bash and C++, as well as being a power user for the GNU/Linux operating system, on which this course was held.
- 2022 – 2023 **IT** AMIV an der ETH - Academic Mech. and Elec. Engineers Association
At AMIV, I managed the IT infrastructure with its server cluster and many applications. I also organized a semesterly coding weekend where we spent a weekend developing for AMIV's IT infrastructure.
- 2022 – 2024 **Vice President / President** Polyband
In Polyband, the big band of UZH and ETH, I was responsible for marketing and advertising, as well as for organizing some events like the rehearsal weekend or the fondue evening. Since I was also a pianist, I also took care of the set-up at concerts.
- 2020 – 2020 **Internal Affairs** VSETH - Association of Students at ETH
In the VSETH board, I was responsible for all student associations, commissions, associated and recognized organizations. External relations were also part of my portfolio.