



This is me

05.12.2000

I am an enthusiastic electrical engineering student with a strong attention to detail and a great desire to understand the depths of my field.

My academic journey has provided me with the technical knowledge to approach new topics in a goal-oriented manner through various methods. But more importantly, it showed my dedication and capability of quickly adapting to new concepts and technologies.

Contact



Fruttstrasse 27
6067 Melchtal



+41 79 455 33 08



leon.nachtrab@gmail.com



Leon Nachtrab



leon-nachtrab.com

Languages

German	Mother tongue
English	C1
French	B2

Coding

C++/C
Python
MATLAB

Leon Nachtrab

Curriculum Vitae

Education

2023
-
2025

● Master's Degree in Electrical Engineering and Information Technology *ETH Zürich*

Focus	Embedded Systems Electric Machines Control Machine Learning and Computer Vision Power Electronics
Master's Thesis	Embedded Control System for Bio-Inspired Saccadic Camera Motion
Overall Grade	5.7

2020
-
2024

● Bachelor's Degree in Electrical Engineering and Information Technology *ETH Zürich*

Core Subjects	Control Systems Power Electronics Measurement and Testing Technology
Bachelor's Thesis	Design and Commissioning of a Double Bearingless Outrunner Motor for Fluid Manipulation Winner of Swissmem Best Thesis Award 2023 – Industry sector drive technology
Overall Grade	5.44

2013
-
2019

● High School Diploma (Matura) *Cantonal School of Obwalden*

Major	Physics and Applied Mathematics
-------	---------------------------------

Software

STMicroelectronics Tools
Altium Designer
SolidWorks
Autodesk Fusion 360
MATLAB/Simulink
Plexim
GitHub

Skillset

Embedded Systems and Sensor
Networks (C/C++, STM32, FreeRTOS)
PCB Design & Hardware Integration
Quick Prototyping & Iterative
Development
Training Machine Learning Models
3D Modelling
Project Leadership & Ownership
Client-Facing Communication &
Consulting

On a personal Note

"To handle yourself, use your head.
To handle others, use your heart."
— Eleanor Roosevelt

"To handle everything else, use
PID control."

What ignites my interest and lets
me forget the time is a problem
that requires going back and forth
between the theoretical software
and the physical hardware. This
interaction is where my true
professional interest lies.

Outside of engineering, you'll find
me ski touring in the Alps,
mountain biking through trails,
playing badminton, making music,
or experimenting in the kitchen.

Ventures

- 2025 ● **Master's Thesis – Collaboration Arma Suisse**
*Design of a Custom Dual Embedded Motor Driver for PMSM in
Military UAV Detection Applications*
- 2024 ● **Exploration Lab – Collaboration with Bühler Group,
Bossard AG, VZug AG and VAT Group**
2025 *Numerous smaller Projects within a Consulting Scope*
- 2025 ● **AIWorkflowGenerator – Project at Bossard AG**
*AI Driven PDF Conversion Automating Instruction Set Creation for
Bossard Smart Stations*
- 2024 ● **Battery Retrofit – Project at Bossard AG**
*Engineering Solution for the SmartBins Reducing Costs by 50% and
CO2 by 16% - Now in Industrialization Phase*
- 2023 ● **Bachelor's Thesis – Collaboration with Levitronix**
Bearingless Double Outrunner Control
- 2021 ● **Tutor in Digital Circuits**
ETH Zürich
- 2019 ● **Military Service**
- *Infantry DD Ber Bat 104*
2020 *COVID-19 Deployment in Geneva*
- 2020 ● **ASVZ TL – Badminton Coach**
- *Coaching and organizing group badminton sessions at ASVZ.*
present

References

- **Philipp Mayer**
Postdoctoral Researcher at ETH Zürich
Supervisor of the Master's Thesis
mayerph@ethz.ch +41 44 632 66 36
- **Julian Moosmann**
PhD Candidate at ETH Zürich
Supervisor of the Master's Thesis
Julian.moosmann@pbl.ee.ethz.ch +41 79 328 15 91
- **Daniel Giesler**
EXL LEAD at ETH Zürich and Innovation Manager at Bossard AG
Supervisor for Projects at Bossard AG
daniel.gisler@bossard.com +41 79 192 46 67
- **Severin Hiltbrunner**
Global Lead Customer Success at Bossard AG
Contact at Bossard for Project AIWorkflowGenerator
Severin.hiltbrunner@bossard.com +41 79 761 17 89