



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	● <b>Master's Degree in Electrical Engineering and Information Technology</b> 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	● <b>Bachelor's Degree in Electrical Engineering and Information Technology</b> 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	● <b>High School Diploma (Matura)</b> Cantonal School of Obwalden	Major	Physics and Applied Mathematics

## Software

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

## Ventures

2025	●	<b>Master's Thesis – Collaboration Arma Suisse</b> <i>Design of a Custom Dual Embedded Motor Driver for PMSM in Military UAV Detection Applications</i>
2024	●	<b>Exploration Lab – Collaboration with Bühler Group, Bossard AG, VZug AG and VAT Group</b> <i>Numerous smaller Projects within a Consulting Scope</i>
2025	●	<b>AIWorkflowGenerator – Project at Bossard AG</b> <i>AI Driven PDF Conversion Automating Instruction Set Creation for Bossard Smart Stations</i>
2024	●	<b>Battery Retrofit – Project at Bossard AG</b> <i>Engineering Solution for the SmartBins Reducing Costs by 50% and CO<sub>2</sub> by 16% - Now in Industrialization Phase</i>
2023	●	<b>Bachelor's Thesis – Collaboration with Levitronix</b> <i>Bearingless Double Outrunner Control</i>
2021	●	<b>Tutor in Digital Circuits</b> <i>ETH Zürich</i>
2019	●	<b>Military Service</b> <i>Infantry DD Ber Bat 104</i>
2020	●	<b>ASVZ TL – Badminton Coach</b> <i>COVID-19 Deployment in Geneva</i>
2020	●	<b>ASVZ TL – Badminton Coach</b> <i>Coaching and organizing group badminton sessions at ASVZ.</i>
present		

## 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.

## 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.ehtz.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.giesler@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