

FLORIAN ZACHS | CURRICULUM VITAE

- » Name: Florian Zachs
- » Birth date: 15.11.2002
- » Address: Königsberg 98, 2842 Thomasberg
- » Portfolio: [Link to GitHub](#) | [Link to LinkedIn](#)
- » Contact: zachs.florian@gmail.com | +4369981159720
- » Summary: All-rounder in robot technology
(Mechanical, Electronics & Programming)



»» Professional experience

since 08/2022	Reet Systems GmbH	Location Mödling/AT
	<ul style="list-style-type: none">» since 10/22 Part-Time during Civil Service<ul style="list-style-type: none">» Responsible for UI/UX Design of the Beckhoff HMI» Planning and development of the industrial user interface» As well as optical refinements using Javascript, HTML and CSS» 08/22 to 09/22 Commissioning Engineer Full-Time<ul style="list-style-type: none">» Complex procedure programming in ST with Beckhoff TwinCAT 3» Commissioning of prototypes, troubleshooting and bug fixing» Planning, assembly and running of testing facilities	
since 10/2022	Paramedic	Location Aspang/AT
	<ul style="list-style-type: none">» Civil Service at SMD Rettungsdienst (Medical Service)	
08/2021	Internship at IGM Robotersysteme AG	Location Mödling/AT
	<ul style="list-style-type: none">» Maintenance of welding robots at IGM's customers (Austria-wide)» Participation in 7-day operator training with IGM welding robots	
08/2020	Internship at Cosma Engineering (MAGNA)	Location Weikersdorf/AT
	<ul style="list-style-type: none">» Equipping of welding robot jigs for vehicle prototype manufacturing» Post-processing of welded aluminium parts	
08/2019	Internship at Constantia Patz GmbH	Location Loipersbach/AT
	<ul style="list-style-type: none">» Maintenance of production machines in the pharma industry	

»» Education

2018 - 2022	Robotics Club robo4you/F-WuTS	Optional subject at HTBLuVA (below)
	<ul style="list-style-type: none">» Homepage: https://robo4you.at» Planning, assembly and programming of mobile autonomous robots<ul style="list-style-type: none">» Technologies: Raspberry Pi, Linux, C++» Participation in international robotics competitions as Team qbit:<ul style="list-style-type: none">» 1. Place Seeding and 2. Overall - World championship/GCER 2022 in Oklahoma/USA» 1. Place Seeding and 1. Overall - Euro-championship/ECER 2022 in Bratislava/SVK» 1. Place DE and 2. Overall - Euro-championship/ECER 2019 in Vienna/AT» Diploma Thesis developed for robo4you	

- » High School Diploma 2022 with excellent success
- » CREO Parametric 5 & 7, CATIA V5, Beckhoff TwinCAT 3
- » Diploma Thesis FLAME: Originally written in English
 - » Link to Online-View | Link to Banner
 - » 4-axis Robotic arm as an extension for the Festo Robotino
 - » Ethernet-Interface and self-developed Arduino-Firmware in C++
 - » Prototype was engineered, assembled, tested and presented

»» Publications

2021 - 2022

Botball meets ARIS, a novel Autonomous Robot Interface Simulation System

- » Presented at ECER and GCER 2022 (Please refer to Robotics Club robo4you)
- » Link to Online-View

2021 - 2022

Differences between Wallaby and NXT-controlled robots

- » Presented at ECER 2019 (Please refer to Robotics Club robo4you)
- » Link to Online-View

»» Presentations

03/2023

Presentation of the Botball Championship

FH St. Pölten

- » At SAINT 2023:
 - » Fair at the FH St. Pölten about Artificial Intelligence
 - » Title: "Die Schule der Weltmeister"
 - » Presentation of the championship itself and our way to the world champion title

»» Expertise and Interests

Modern software development

- » C++: Very in-depth expertise by more than 7 years of practical experience
 - » Both in terms of modern Standard Library Features (C++17 and above)
 - » As well as Low-Level or Embedded Programming, or Memory Management
 - » As a result, equally in-depth expertise about modern CMake (CMake 3.16+)
 - » Please refer to the GitHub Portfolio for hobby project examples
- » General-Purpose Tools for modern software development:
 - » CMake, git, GitHub DevOps, Markdown/Doxygen, Batch, bash, LaTeX
- » Advanced knowledge of JavaScript/TypeScript in relation to Node.js/Electron.js
- » Basic knowledge of Python and Rust
- » Great Appreciation for user-friendliness and clean code

PLC-Programming with Beckhoff

- » Advanced skills in ST with Beckhoff TwinCAT 3
- » In-depth skills in the Beckhoff HMI workspace

Embedded Software

- » In-depth skills in Arduino, STM32 and Raspberry PI programming

Mechanical Engineering/CAD/CAM

- » In-depth skills in mechanical construction and mechanical drawings
- » Advanced skills with Creo Parametric and Autodesk Fusion 360
- » Basic knowledge of Solidworks CAM and Catia V5

Electronics

- » Solid base knowledge of electronics and electronic circuits

Control Theory

- » Special interest in Software related to Control Theory
 - » In-depth knowledge about PID controllers (Theory and Implementation)
- » Basic knowledge of ROS (Linux-Framework for robotics systems)

Operating systems

- » In-depth skills with Windows and Linux operating systems
 - » As well as Embedded Linux skills based on Raspberry Pi

»»» Miscellaneous

Certificates

- » Participation at Beckhoff Summer School (Advanced)
 - » PLC-Programming in the area of Control Theory

Licenses

- » Drivers licenses B and F
- » Forklift drivers license
- » Crane operating license for floor-controlled cranes up to 300kN

Languages

- » German (Mother language)
- » English (fluent)

»»» Final words

The majority of my knowledge is based on self-learning, hobby projects or the Robotics Club robo4you, although the last two are interwoven. The knowledge i gained from school is minor in comparison, most of it was gained outside of school.

I am very interested in industrial robots, both from the mechanical and electrical side, as well as from the software side. For programming, I am especially interested in Control Theory and any software that is used to run a robot (from the motor controller to the user interface). I have great appreciation for a clean working strategy and an uncomplicated user experience.

Especially during my first job as a programmer i learned that i am by far no longer a junior programmer. I am very ambitious and - when it is time to do so - want to take over a position as a project leader that actively works on the project and has the overview to lead any operations. Communication is key for me!

The Technische Universität Graz is planned to be my further education, and i want to study Digital Engineering as a Master's Degree. A participation in the TU Graz Racing Team or the Aerospace Team is also not unlikely.

Thank you for your interest in my Curriculum Vitae!

Best Wishes

Florian Zachs