Elias Wachmann

Curriculum Vitae

Education

2020–	**Bachelor of Science**, *Graz University of Technology*, Graz.
	NAWI-Graz Physics BA& Softwareengineering and Management BA
2020–	**Bachelor of Science**, *Karl-Franzens-University*, Graz.
	NAWI-Graz Physics BA
2011–2019	**AHS-Matura (Austrian High School Diploma)**, *BG/BRG - Fürstenfeld*, Fürstenfeld, Grade: *1,0*.
	Main Subjects: Maths, Chemistry, Physics, Geometry and CAD, Computer Science Graduation Work: Funktionsweise einer Blockchain am Anwendungsbeispiel von Bitcoin (How a Blockchain works with Bitcoin as an application example); Won the Dr.-Hans-Riegel-Fachpreis for Graduation Work.

Projects

2016–2017	Erasmus+ - project: Freiheit und Grenzen - with partner school FOSBOS Friedberg student-exchange and production of educational videos

Work Experience

10/2022–	**Tutor - Data Structures and Algorithms**, *Graz University of Technology*, Graz.
	Teaching data structures, sorting, hashing, trees, heaps, dynamic programming and geometric algorithm basics to undergrads.
07/2022–08/2022	**Intern - Advanced Simulation Technologies**, *AVL List GmbH*, Graz.
	Responsibly for data validation of finite element multibody simulations. Working on validation for synchronous permanent magnet machines as well as induction machines. Main areas:

- Validation of FE simulations with reduced sampling
- Streamlining the validation process through python scripts
- Software testing

08/2021– 09/2021	**Intern R&D - Department**, *Nidec Corporation*, Fürstenfeld.

Involved significantly in the research and development department in the preliminary study for the introduction of a new compressor platform. Main tasks: data analysis and data preparation, as well as finding the optimal platform for the predicted market. Here I was also able to gain experience in international cooperation with participating colleagues from Brazil and Slovakia. Further projects and areas of work:
- Implementation of a web scraper for market analysis of refrigeration equipment
- Modelling of hysteresis curves for calculations of an engine simulation program
- Excel - Simcenter SPEED interface

2019–2020 **Paramedic**, *Österreichisches Rotes Kreuz*, Fürstenfeld.

Civilian service as a paramedic with the Austrian Red Cross.

As a paramedic, I was able to gain a wide range of experience in medical assistance, in emergencies and non-emergencies, but also in interpersonal dealings. As a trained emergency driver with responsibility over patients and my accompanying paramedic, I learned to make the right decisions for patients in stressful situations calmly and quickly. Even after the end of my civilian service, it is still important to me to help people in acute need, which is why I continue to volunteer.

08/2018 **Intern**, *Estyria Naturprodukte GmbH*, Wollsdorf.

Collecting knowledge and facts about raw materials in a knowledge database to support salespeople and key account managers.

Awards

Academic

2022 Member of Circle of Excellence Graz (Year 2022)

2021 Merit-Based Scholarship & Top 10% of first-year Software Engineering and Management students
Faculty of Computer Science and Biomedical Engineering TU Graz

2021 Merit-Based Scholarship
Faculty of Mathematics, Physics and Geodesy, TU Graz

2020- Scholarship holder of the Fürst Dietrichstein'schen Stiftung 20/21 & 21/22

2019- Member of MINTTANK Graz (Dr. Hans Riegel-Stiftung - Kaiserschild-Stiftung)

2019 Dr.-Hans-Riegel-Fachpreis for my graduation work: Funktionsweise einer Blockchain am Beispiel von Bitcoin (How a Blockchain works with Bitcoin as an application example)

2019 Chemistry Olympiad state-wide silver medal and qualification for the national finals

2018 Chemistry Olympiad state-wide silver medal and qualification and participation at the national finals

Sports

2017 Qualification & participation ISF - World Schools Championships Orienteering Italy

2015 Qualification & participation ISF - World Schools Championships Orienteering Turkey

2015 Goju-Ryu karate - Austrian junior champion Kumite < 68 kg

Knowledge and Certifications

Hardware	Arduino, Raspberry Pi
Software	MS Office, CAD, Vegas Pro, Reaper, Linux, MS-Windows
	PYTHON, C, C++, VBA, (POSTGRE)SQL, GIT, LATEX
	6.00.2x: Introduction to Computational Thinking and Data Science
Hard skills	Project management (finances and organization prom)
	Sound engineering (PA, mixing and live production for my school)
	Paramedic at Austrian Red Cross
Soft skills	Teamplayer with high stress resistance due to my activities as a paramedic
	Organizational talent with good time management - Activities and involvement in many associations and sport clubs

Languages

German	**Mother tongue**	
English	**Proficient**	*EF SET English Certificate 88/100 (C2 Proficient)*

Leisure & Volunteer work

2019–	Voluntary paramedic at Red Cross Fürstenfeld
2014–	Orienteer at Orientierungslauf Club Fürstenfeld (medals at state- & nationwide competitions - twice qualified and participated in ISF - World Schools Championships Orienteering)
2010–	Member voluntary fire department Großhartmannsdorf
2006–	Drummer for several ensembles and the school orchestra, since 2019 drummer of ICONIC
2006–2017	Karateka at Karateclub Volksbank Fürstenfeld (medals at state- & nationwide competitions - styrian-team member)

Interests

- Physics
- Cryptocurrencies
- Orienteering / Running
- Computer Science
- Software Engineering
- Music