

Niklas Abraham

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Education

University of Stuttgart	Stuttgart, Germany
Bachelor of Science in Simulation Technology	
A bachelor program focusing on excellent academic research in the areas of <i>mathematics, physics, computer science</i> , applied and theoretical courses like Calculus I-IV numerical mathematics, machine learning and more, elected focus is on AI and bioinformatics	
Projected grade 1.9 and 69 in UK	
Scholarship Holder: German Scholarship Foundation	Germany
The Studienstiftung des Deutschen Volkes is Germany's top scholarship foundation, supporting outstanding students with funding and development programs.	
<ul style="list-style-type: none">Two-week summer program in Switzerland, course work: "Sustainable development in developing countries", part of Program visiting IFO and UN at Geneva, reading and learning about new economic policies for developing countriesThree-week summer school in France (Montpellier) learning French, living in host family and experiencing culture	
School Exchange Australia (3 Months)	Perth, Australia
Christ Church Grammer School	2019
Schönbuch Gymnasium Holzgerlingen	Holzgerlingen, Germany
German High school diploma, graduated with prizes for excellent studies in STEM and economics	
German grade 1.0, GPA 4.0	July 2022

Experience

Institute of Biochemistry and Technical Biochemistry	Stuttgart, Germany
Researching student	2023 – today
<ul style="list-style-type: none">Conduct research on TEM-Lactamase proteins using the Python Enzyme Engineering Database (PyEED), a specialized Python package for protein analysis.Contribute to the development of PyEED, which leverages Neo4J to create complex networks for proteins, DNA, and ontologies.Collaborate with a research team under Prof. Jürgen Pleiss to advance bioinformatics methods for enzyme engineering.Focus on integrating graph databases and vector embeddings to enhance bioinformatics tools for protein and ontology analysis.Programming LLMs for vector embeddings in proteins and ontologies	
Levigo solutions GmbH	Holzgerlingen, Germany
Student software engineer	April 2020 – Sept 2021
<ul style="list-style-type: none">Setting up docker Kubernetes cluster using ElasticsearchProgramming custom plugins for various analytics for docker containers	
Racing Team Fusion (Student competition "f1inschools")	Holzgerlingen, Germany
Aerodynamics engineer	Sept 2018 – Sept 2019
<ul style="list-style-type: none">Achieved 2nd place at the World Championship in Abu Dhabi 2019 (best place for Germany until then)Led vehicle development as the main responsibility in the largest student engineering competition, "f1inschools."Coordinated the engineering team, applying principles of physics and mechanics while developing testing	

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methods and supporting the manufacturing process.

- Gained expertise in technical mechanics, test planning, **CAD** software design, **Ansys fluent aerodynamics**, mesh settings, and technical drawing creation.
- Collected 30 000€ in funding from **sponsoring** various Germany companies
- Developed foundational knowledge of various **manufacturing processes** while fostering effective communication and **teamwork**.

Leadership & Activities

KiSS e.V. (local sport courses for children)

Climbing Trainer

- Climbing trainer for children twice a week, two groups with ten children ages 5-10 years

Weil im Schönbuch, Germany

July 2022 – today

Member of Faculty committee at University Stuttgart

Faculty member & Simulation Technology committee student speaker

- Voted member and **representing** for students of Simulation Technology

Stuttgart, Germany

August 2023 – today

Competitions and Activities over years

- **Competing** at German national **Artificial Intelligence** competition for high school students
- **Junior Science Academy**, course in technology and chemistry
- **Leading and founding** roles in high school in **3D-Printing** and Science activities
- Jugend Forscht (Junior **Science competition** in physics,) **second place in state finals**

Germany

May, 2019

July, 2018

2014-2022

2017

Skills & Interests

Technical: python (expert), docker (advanced), java (advanced), C++(advanced), git (expert)

Language: German (native), Polish (native), Englisch (C1), French (B2)

Interests: reading (all non-fiction books I can find, except for Dune 😊), triathlon (next up is a 70.3 Ironman), climbing (indoor with friends), debating with friends about politics and economics

Publications

“*Design and Realization of a Fast Optimal Transform*”; as part of studies, at the Institute of Numerical Mechanics, supervised by Tom Könecke and Lennart Frie; University of Stuttgart; April 2024