

Anton Achhammer

Curriculum Vitae

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Education

- Mar. 2021 – Mar. 2023 **M.Sc in Computer Science**, *Technical University of Applied Sciences, Regensburg, Germany*
Main courses: distributed computing, artificial intelligence, modern theoretical computer science, modern database concepts, modern software techniques.
Skills: NoSQL, Python, JavaScript, \LaTeX .
Project contributions: "Waste Management: Route optimization for waste disposal" - recording of garbage can filling levels and optimization of the route, "Car charging station app".
Student research paper: "Vertical Farming: How can AI and ML optimize plant growth".
Thesis: "Design and implementation of a health score for calves" using sensor technology and AI.
- Oct. 2017 – Mar. 2021 **B.Sc in Computer Science**, *Technical University of Applied Sciences, Regensburg, Germany*
Main courses: software engineering, innovation management, business administration, IoT, design thinking.
Skills: C, Java, HTML, CSS, JavaScript, Matlab, SQL, Assembler, \LaTeX .
Thesis: "Conception and implementation of a visualization of automated warehouse systems".
- Sep. 2009 – Jun. 2017 **A levels**, *Albertus Magnus Gymnasium, Regensburg, Germany*
Main subjects: mathematics, computer science, english.
Skills: Java, HTML, Assembler, SQL.
Voluntary activities: member of the school's medical service, member of the school's technology team, tutor in the prevention projects "Netzgänger" and "AMG against cyberbullying", mentoring tutor.

Work Experience

- Mar. 2024 – today **Lecturer**, *Technical University of Applied Sciences, Regensburg, Germany*
Lectures and supervision of project work for students on the bachelor's degree program in Renewable Energy Technology and Energy Efficiency on the topic of "Sustainable energy system modeling using PyPSA".
- May 2023 – today **Research Assistant**, *Institute for Energy Networks and Energy Storage (FENES), Regensburg, Germany*
Modelling and development of low carbon energy systems with focus on sector coupling and energy storage, Co-Development of the open source energy system model "PyPSA Earth", Deputy project manager in the "H2Global meets Africa" project, supervision of student assistants and thesis projects, budget planning with CEUS.
Skills: Python, PyPSA, \LaTeX , CEUS.
- Jan. 2025 – Mar. 2025 **Guest Researcher**, *University of Oxford, Oxford, UK*
Development of open energy system models
Skills: Python, PyPSA.

- Sep. 2024 – Oct. 2024 **Guest Researcher**, *Council for Scientific and Industrial Research (CSIR)*, Pretoria, South Africa
Research on open energy system modelling
Skills: Python, PyPSA.
- Apr. 2022 – Sep. 2022 **Thesis Student**, *Futuro Farming GmbH*, Regensburg, Germany
Reading of movement data via sensors - prediction of diseases via AI.
Skills: Python, AWS, Pandas.
- Aug. 2019 – Feb. 2023 **Intern, Working Student, Thesis Student**, *TGW Software Services GmbH*, Regensburg, Germany
Working in the fields of software development and project management.
Agile software development with Scrum and JIRA, effort estimates, specification, project management, software tests, knowledge transfer via Confluence, bug fixing.
Skills: Java, SQL, L^AT_EX.
- Jul. 2014 **Intern**, *Continental Automotive*, Regensburg, Germany
Skills: C#, SQL.

Scholarships and Awards

- Sep. 2025 **BayFor WKS Bavaria-Africa Mobility Grant**
Scholarship for research trip to East Africa
- Jun. 2025 **Sparkassen Sustainability Award**
Award for particularly sustainable behavior, granted for my work on educational materials for open-source energy models
- Jan. 2025 **Erasmus+ scholarship**
Scholarship granted for my research visit at the University of Oxford
- Dec. 2024 **First place at the Berlin Science Slam**
Science slam on “Modeling socially and climate-friendly hydrogen partnerships”
- Oct. 2024 **Finalist West German Science Slam**
Science slam on “Modeling socially and climate-friendly hydrogen partnerships”
- Jul. 2024 **Future energy labs (FEL) scholarship of the German Energy Agency (dena)**
Scholarship granted for my research trip to Southern Africa
- Jun. 2024 **First place at the Regensburg Science Slam**
Science slam on “Modeling socially and climate-friendly hydrogen partnerships”

Publications & Reports

- 2025 Schamel, M., **Achhammer, A.**, Schumm, L., Sterner, M., *Harvesting Sustainability: Cost-competitiveness of Green Fertilizer Value Chains in Western Africa*, in *IEEE Xplore: Proceedings of the IEEE PES/IAS PowerAfrica Conference 2025*, doi: 10.1109/PowerAfrica65840.2025.11289137.
- 2025 Uhl, J., Schamel, M., **Achhammer, A.**, Sterner, M., *Sustainable Steel Production in the Desert: Economic and Technical Assessment of a Hydrogen-Powered Steel Plant in Mauritania*, in *IEEE Xplore: Proceedings of the IEEE PES/IAS PowerAfrica Conference 2025*, doi: 10.1109/PowerAfrica65840.2025.11289120.

Skills

Programming Languages	Python (excellent), Java (excellent), SQL (excellent), C# (very good), C (very good), JavaScript (good) Profound knowledge in energy system modelling languages
Languages	Deutsch (native), Englisch (C1), Latein (intermediate certificate) Fluent in German and English
Applications	Microsoft Office (excellent), L^AT_EX(very good) Excellent knowledge in Microsoft Office applications and L ^A T _E X for publications

Voluntary Activities

- Oct. 2025 – today **Faculty Council, Technical University of Applied Sciences, Regensburg, Germany**
Representative of the scientific employees.
- Oct. 2023 – today **Volunteer, Scientists for Future, Regensburg, Germany**
Support of the local group in Regensburg.
- Oct. 2023 – today **Volunteer, Viva con Agua, Regensburg, Germany**
Support of various charity and educational campaigns of the local group in Regensburg.
- Dec. 2011 – today **Firefighter, Freiwillige Feuerwehr Pettendorf, Pettendorf, Germany**
- Dec. 2022 – today **IT Representative, Freiwillige Feuerwehr Pettendorf, Pettendorf, Germany**
- Nov. 2020 – today **Webmaster, FC Pielenhofen-Adlersberg, Pettendorf, Germany**
- Oct. 2023 – Jul. 2025 **Volunteer, Ratisbona Coding e.V., Regensburg, Germany**
Support of educational events.
- Nov. 2021 – Mar. 2025 **IT Representative, TSV Adlersberg, Pettendorf, Germany**
- Sep. 2014 – Jul. 2017 **School first aid service, Albertus-Magnus-Gymnasium Regensburg, Regensburg, Germany**
- Jul. 2016 **Media tutor in the “AMG against cyberbullying” prevention project, Albertus-Magnus-Gymnasium Regensburg, Regensburg, Germany**
- Sep. 2013 – Jul. 2016 **Member of the technology team, Albertus-Magnus-Gymnasium Regensburg, Regensburg, Germany**
- Mar. 2015 – Jul. 2016 **Media tutor in the “Netzgänger” prevention project, Albertus-Magnus-Gymnasium Regensburg, Regensburg, Germany**
- Sep. 2013 – Jul. 2015 **Mentoring tutor, Albertus-Magnus-Gymnasium Regensburg, Regensburg, Germany**