AMANDA MATTHES

Website	amanda-matthes.github.io
E-mail	amanda.matthes@gmail.com
LinkedIn	linkedin.com/in/amanda-matthes

WORK EXPERIENCE

07/2024 - now: **Amodo** - Sheffield, UK

Engineer, mostly for software and firmware

07/2019 - 08/2019: **CERN** - Geneva, Switzerland

Intern at the data centre as part of the CERN Summer Student Programme

03/2019 - 05/2019: **Institute for Computer Engineering (ZITI)** - Heidelberg, Germany

Student Research Assistant for the Computer Architecture Group

10/2018 - 03/2019: **University of Heidelberg** - Heidelberg, Germany

Teaching Assistant for the course "Introduction to technical computer science"

EDUCATION

10/2019 - 04/2025: **University of Oxford** - Oxford, UK

PhD student at the EPSRC Centre for Doctoral Training in Autonomous Intelligent Machines and Systems (AIMS CDT)

- Co-developed working on SnapperGPS, a low-power GNSS receiver for wildlife tracking
- 10-week project with the Satellite Applications Catapult on space debris removal
- Course topics included: signal processing, optimisation, reinforcement learning, AI safety and governance, embedded systems, deep learning, control theory, computer vision, privacy and security, IOT and game theory
- Society involvement: Oxford University Powerlifting Club (2021-2022: Novice Captain), Oxford University Physics Society (2020-2021: Publicity Officer, 2021-2022: Media Officer), Keble College MCR (2021-2022: Arts & Culture Officer, 2022-2023: IT Officer)

10/2015 - 07/2019: **University of Heidelberg** - Heidelberg, Germany

BSc in Physics - Grade: 1.3*

- BSc thesis topic: Exploiting Instruction-Level Parallelism - Hardware Structures for a Superscalar Out-of-Order Processor

- Course topics included: linear algebra, calculus, hardware design, technical computer science, applied computer science, algorithms and data structures, mechanics, electrodynamics, special relativity, quantum physics and particle physics
- 24 credits ≈ 600-700h of laboratory work (executing and documenting over 40 experiments)

09/2017 - 06/2018: **University of Manchester** - Manchester, UK

Erasmus+ year at the Department of Physics and Astronomy

- Course topics included: quantum computing, applications of quantum physics, philosophy of physics, quantum field theory, lagrangian dynamics, solid-state physics, astrophysics and cosmology, exoplanets and object-oriented programming in C++
- Active member of the Systematic Martial Arts Society and the historical reenactment society Historia Normannis

09/2010 - 07/2015: **St.-Anna-Gymnasium** - Munich, Germany

Abitur (German A-levels) - Grade: 1.4*

- Final exam subjects: Maths, Physics, English, German, Economics and Law
- Seminar thesis on "The idea of light as a wave in the 19th century"
- Awarded the DPG-Abiturpreis by the German Physical Society for outstanding performance in physics

SKILLS

Languages	English	Bilingual proficiency
	German	Bilingual proficiency
Coding	Python	Data analysis, data visualisation, application development
	JavaScript	Application development (Electron)
	C	Embedded firmware development
	C++	Application development
Software Skills	PCB design with EAGLE	
	Computer-aided design (CAD) with Fusion 360	
Hardware Tools	Fused deposition modelling (FDM, 3D printing with filament)	
	Stereolithography (SLA, 3D printing with resin)	

Sheffield, 2025"

*German grades work on a scale of 1.0 to 6.0, with 1.0 being the best.