



Melvin Strobl

Doctoral Researcher / Software Engineer / Enthusiastic DIY Hobbyist

Passionate about data science and optimizing things.
Sparkling with ideas and curious for tackling tough challenges.

Karlsruhe, Germany stroblme@posteo.de github.com/stroblme in/stroblme Google Scholar

EDUCATION

Doctoral Researcher 2022 - Present

Karlsruhe Institute of Technology / Karlsruhe

Informatics. Thesis: **Quantum Fourier Models: Metrics, Noise Resilience and Applications in High-Energy Physics.**

Master of Science 2019 - 2021

Karlsruhe Institute of Technology / Karlsruhe

Electrical Engineering, Signal Processing. Thesis: **Quantum computing assisted speech recognition**

Bachelor of Science 2015 - 2019

Karlsruhe Institute of Technology / Karlsruhe

Electrical Engineering, elementary studies.

EXPERIENCE

Supervision 2022 - Present

Karlsruhe Institute of Technology / Karlsruhe

Supervision of 2 master- and 2 bachelor theses, 3 Student assistants and participation in quantum computing lectures

Supervisor 'JuFo' WG 2021 - 2023

German Cancer Research Center / Heidelberg

Continuing work at the Life-Science-Lab by consulting and supporting pupils during their work on 'Jugend forscht' projects.

Working Student 2016 - 2022

Microchip Technology / Karlsruhe

Team FPGA Design and Development at the Karlsruhe department of Microchip Technology.

Supervisor WG for Robotics 2016 - 2022

German Cancer Research Center, TU Kaiserslautern / Heidelberg, Kaiserslautern

Supervising young students in a working group for robotics at the DKFZ in collaboration with the University of Kaiserslautern.

SELECTED PROJECTS

N3XD n3xd.io

Fullstack parametric CAD software with AI capabilities.

Fluksio fluksio.com

Automation software from facilities to data science pipelines

Wren fluksio.com

A tiny foundation model, bridging quantum and classical ML

SKILLS

Python PyTorch JAX Docker Slurm
Data Science Machine Learning

LANGUAGES

German Native
English Fluent

CONTINUING EDUCATION

Agile Project Management

KHYS, 2024

Business Studies in a Nutshell

KHYS, 2024

Visualising Science

KHYS, 2024

INTERESTS

Embedded Systems 3D Printing Servers
Automation DIY Climbing Photography

SELECTED PUBLICATIONS

Fourier Fingerprints of Ansatzes in Quantum Machine Learning

doi.org/10.1088/2058-9565/ae8df8

Strobl et al., IOP-QST, 2026

Beyond Gates: Pulse Level Quantum Fourier Models

doi.org/10.48550/arXiv.2605.04945

Strobl et al., QCE (*), 2026

QML Essentials - A framework for working with Quantum Fourier Models

doi.org/10.1109/QSW67625.2025.00035

Strobl, Franz et al., QSW, 2025

Software Between Quantum and Machine Learning -- And Down to Pulses

doi.org/10.48550/arXiv.2605.21286

Franz, Strobl et al., QSW, 2026

Out of Tune: Demystifying Noise-Effects on Quantum Fourier Models

doi.org/10.48550/arXiv.2506.09527

Franz, Strobl et al., 2025