MIKE TRZASKA

CONTACT INFORMATION

Mobile number:
+49 15753663676

GitHub:
https://github.com/HokageM

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LANGUAGES

German (native)
Englisch (fluent)

TECH STACK

Programming Languages:
C++, Python, C, Dart, TypeScript

Data Science & Machine Learning:
PyTorch, NumPy, Pandas, Matplotlib, PyTorch, Scikit-learn, Imbalanced-learn, OpenCV, OpenAI, LangChain

Further Tools & Frameworks:
RDKit, CMake, Conan, PyTest, Catch2, React, Flutter, FastAPI, Jupyter

DevOps & Infrastructure:
Git, Docker, PostgreSQL, Vertex AI, Github Actions, Raspberry Pi

HOBBIES

Basketball
Calisthenics

WORK EXPERIENCE

ML / AI Engineer
TCC GmbH, Hamburg, Hamburg
October 2025 – Present
Integrated an end-to-end MLOps pipeline for medical data, covering EDA, model training, and deployment. Acted as lead developer for a multimodal deep learning architecture (time-series ECG + scalar features) and two LLM-based medical applications.
Achievements: Successfully trained a ResNet-based model on the newly established MLOps infrastructure and deployed an LLM-based demo.

Master Thesis
Eppendorf SE, Hamburg, Hamburg
April 2025 – September 2025
As part of my thesis, I developed and compared several LLM-based techniques for semantic parameterization of laboratory protocols. Among them, I introduced OLLM (Ontology-guided Large Language Model), which integrates an ontology as external knowledge base. I also built a ground truth dataset and an evaluation framework.
Achievements: The OLLM is accepted to be integrated into automated lab software.

Working Student
Eppendorf Liquidhandling GmbH, Hamburg, Hamburg
October 2022 – September 2025
Responsible for maintaining and extending a GUI testing tool for embedded systems. Involved in solving a variety of software development tasks across different projects. Conducting research on the semantic parameterization of laboratory protocols using LLMs.
Achievements: Contributed to the continuous improvement of internal tooling for embedded testing and conducted early research on the integration of LLMs into laboratory software workflows, which laid the foundation for my subsequent master's thesis.

Bachelor Thesis
Eppendorf Liquidhandling GmbH, Hamburg, Hamburg
April 2022 – September 2022
Developed a model-based testing framework for GUIs in embedded systems, using GUI libraries to automate interactions and validate behaviors. The framework was designed for scalability and maintainability through model abstraction.
Achievements: Laid the foundation for a reusable GUI testing tool that is now actively used in several embedded software projects across the company.

Working Student
Eppendorf Liquidhandling GmbH, Hamburg, Hamburg
April 2021 – March 2022
Developed hardware prototypes by integrating components on STM32 boards.
Programmed, extended, and tested embedded software modules.
Achievements: Built functional hardware prototypes for early-stage development and improved modular code design.

Mandatory Internship
Eppendorf SE, Hamburg, Hamburg
February 2021 – March 2021
Enhanced a unit testing tool for embedded systems to execute directly on physical devices.
Developed scripts for Git-based CI/CD workflows to enable continuous testing.
Achievements: Enabled reliable test execution on hardware targets and improved CI/CD integration for automated quality assurance.

Internship
Eppendorf Liquidhandling GmbH, Hamburg, Hamburg
October 2020 – January 2021
Developed an emulator-based unit testing framework for embedded systems.
Integrated the framework into a GitHub CI/CD workflow within an Agile/Scrum team.
Achievements: Designed a flexible automated testing infrastructure still actively used across multiple projects.

Student Tutor
Technische Universität Hamburg, Hamburg, Hamburg
September 2019 – August 2020
Tutored modules *Object-Oriented Programming* and *Algorithms & Data Structures* and *Computing in Mechanical Engineering*.
Achievements: Gained experience in teaching and communicating technical concepts to large groups of students.

EDUCATION

Master of Science in Bioinformatics
Universität Hamburg
October 2018 – September 2025
Final grade: 1,56

Bachelor of Science in Computer Science and Engineering
Technische Universität Hamburg
October 2018 – September 2022
Final grade: 1,7

Abitur, Major: Chemistry
Stadtteilschule Poppenbüttel
August 2015 – July 2018
Final grade: 2,3

DATA SCIENCE & MACHINE LEARNING PROJECTS

IRL with Python:
Implemented various inverse reinforcement learning algorithms in Python and PyTorch to solve the MountainCar-v0 task.

Lung Cancer Risk Prediction System:
Built a full-stack web app for lung cancer risk prediction with React, FastAPI, and PostgreSQL. Includes secure doctor authentication, encrypted patient data, and decision-tree-based prediction.

HeartPredict:
Developed a Python library to analyze and predict heart failure outcomes using Scikit-learn, including classification, regression, and survival analysis.