# Tarek Akrout

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### EDUCATION

Technical University of Munich, M. Sc in Computer Science

Technical University of Berlin, B. Sc in Computer Science Bachelor thesis on Quantization-aware training for neural network (1,0)

Oct 2024

Munich, Germany

Oct 2021 - Sept 2024

Berlin, Germany

Experience

TU Berlin Apr 2024 – Oct 2024

Tutor and student assistant

Berlin, Germany

• Guided students in solving assignments for the "Algorithms and Data Structures" course.

- Developed an automated exam generation and grading pipeline in Python for the "Python for Machine Learning" course.
- Assisted in organizing, and grading exams.

Siemens Mobility Jul 2022 - Oct 2023

Working student: Web developer

Berlin, Germany

- Used web APIs to integrate data from different systems into our databases.
- Assisted in the design and architecture of databases.
- Created multiple KPI dashboards and produced user-friendly frontend views, including map displays and Gantt charts, to enhance data comprehension.

# 1&1 Telecommunication SE

 $Jan\ 2022 - Jun\ 2022$ 

Working student: Software developer

Berlin, Germany

- Wrote YAML files and SQL queries in order to improve system monitoring and performance evaluation.
- Prepared Grafana dashboards for better data visualization.

## Online Courses

Convolutional Neural Networks | Jun 2021

Structuring Machine Learning Projects | May 2021

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization | May 2021 Neural Networks and Deep Learning | Apr 2021

#### Projects

ML: Quantization-aware training for VAEs and diffusion models, Neural Style Transfer, basic entity resolution pipeline.

Web development: Implementation of a Kanban board.

Computer Graphics: Shading and Texture mapping using glsl.

#### Technical Skills

Languages: Python, Java, C, C++, SQL, TypeScript, Haskell, Prolog.

Technologies: PyTorch, Numpy, Matplotlib, git, Spark and basics of : pandas, Vue.js, Express.js and docker.

#### Laguages

Arabic, French, English (C1), German (C1)