

# Marek Lorenz

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## EDUCATION

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### Vitzthum High School

August 2013– July 2021

Dresden, SN

- Abitur (Diploma of Secondary School, Qualification for University)
- Average Grade 1.0 (=4.0 GPA)
- Advanced Courses in Math and Physics

### Technical University of Munich

since October 2021

Munich, BY

- Computer Science Major
- Thesis about modifications to scenario-based testing for autonomous driving

### LMU Munich

since October 2022

Munich, BY

- Computational Linguistics Minor
- Curriculum comprised of NLP specializations

### University of California, Santa Barbara

since June 2024

Isla Vista, CA

- Data Science and Statistics (PSTAT5A, ES2)
- 4.0 GPA
- Exchange Quarter

## INTERNSHIPS

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### Maltego - Web Developer

May 2023– July 2023

Munich, BY

- Web Development internship
- Created an integrated Graph Viewer to visualize Open-Source investigations using React and the graph visualization library yFiles
- Team Lead, managing a group of 4 fellow students

**Parloa - R&D Intern**

October 2023– March 2024

Munich, BY

- Part of a research group of undergraduate and grad students using statistical methods to dynamically evaluate the quality of different chatbot iterations
- Building a chatbot evaluation framework using Express.js and Typescript
- using NLP libraries langchain, SpaCy and NLTK for chatbot analysis
- Deployment with Azure

## PROFESSIONAL

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**Technical University of Munich**

September 2022 - March 2024

Munich, BY

- Student Assistant teaching the pre-course for Discrete Structures and Higher Mathematics
- Teaching Assistant in the course Introduction to Programming

**AwesomeQA - Software Engineer**

since March 2024

Munich, BY

- Backend Development with Fast API, PostgreSQL, Kubernetes
- Executed metric-driven response optimization for community management bot
- Maintained evaluation framework for AI iterations and AB-tests
- Optimized embeddings for RAG with indexing
- Integrated with various APIs including OpenAI, Cohere, Anthropic

## AWARDS

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**HackaTUM Bloomberg**

October 2022

Munich, BY

- Winner of Bloomberg's challenge at TUM's annual hackathon
- built an order matching algorithm using Python and MongoDB

**German National Merit Based Scholarship - Deutschlandstipendium**

November 2022

Munich, BY

- Recipient of a scholarship for extraordinary academic achievements

**State Medal of Saxony for Outstanding High School Academ. Achiev.**

July 2021

Dresden, SN

## COMMITMENT & LEADERSHIP

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### ARQUEST SSERN - Student Researcher

since July 2020

Irvine, CA / remote

- Organization of and participation in data science research projects

## SKILLS

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### Programming Languages / Frameworks

- Python (Tensorflow, NumPy, Pandas, NetworkX, Selenium, SpaCy, NLTK, FastAPI)
- Java (Spring Boot)
- OCaml
- C, x86-Assembly, VHDL
- Go
- JavaScript/TypeScript (React, Express.js)
- HTML, SASS, Tailwind CSS, Flowbite

### Database

- PostgreSQL
- Google Cloud Storage
- Firestore

### DevOps / Architecture

- Docker
- Kubernetes
- Google Cloud
- Azure / Azure AI