Xhemal Kodragjini

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Professional Profile

Machine Learning Engineer with 4+ years of industry experience across ML/AI engineering, Cloud, and MLOps. By expanding my role beyond core ML into cloud and deployment work, I've built a well-rounded skill set and can support the full ML lifecycle: from research to production. With an MSc in Data Science, I bring both theoretical foundations and practical engineering experience, and I'm looking to continue growing as an ML/AI Engineer.

Technical Skills

Languages: Python, SQL, JavaScript
Machine Learning: PyTorch, TensorFlow, JAX, Scikit-learn, Pandas, NumPy, Langfuse, LLMs, XAI
Cloud & DevOps: Google Cloud Platform (GCP), Terraform, Docker, Jenkins, Git, MLOps

Professional Experience

Aleph Alpha   **June 2025 - Present**
AI Working Student (Part time)   *Berlin, Germany*

- Implemented a Langfuse dashboard to monitor Large Language Model (LLM) application usage and debugging.
- Developed a Python script to evaluate Model Context Protocol (MCP) tool calls.
- Built a custom Question Generator tool with varying prompts and model parameters, supporting request batches.

Deutsche Bank   **July 2023 – Dec. 2024**
Cloud Platform Engineer (Full time)   *Berlin, Germany*

- Provisioned and managed Google Cloud resources using Terraform with Infrastructure as Code (IaC) principles.
- Automated infrastructure tasks by writing Python scripts over Terraform APIs.
- Co-led the design and development of reusable Terraform modules for scalable cloud infrastructure.

Deutsche Börse Group   **Oct. 2021 – March 2023**
Graduate IT Trainee (Full time)   *Frankfurt am Main, Germany*

- Delivered a PySpark-based PoC for extraction of transaction data, after refining business requirements.
- Organized workshops and demo sessions on the usage of DocuSign functionalities.
- Supported the creation of the RunBook, collecting technical tasks and analyzing dependencies between systems.

IQ Wireless GmbH   **Apr. 2021 – Sep. 2021**
AI Software Engineer (Full time)   *Berlin, Germany*

- Developed a customized MLOps platform for automatic training and testing of fire detection models.
- Built APIs for data exchange with Flask and automated the jobs execution via Jenkins.
- Designed a fully responsive and component-based UI via React JS.

IQ Wireless GmbH   **Oct. 2020 – March 2021**
Machine Learning Intern (Full time)   *Berlin, Germany*

- Trained and tested computer-vision neural networks for fire detection using TensorFlow.
- Automated AI workflow through Python-based scripts and stored logs in SQL Server database.

Education

Freie Universität Berlin   Oct. 2023 – January 2026
Master of Science in Data Science   *Berlin, Germany*

- Relevant Coursework: Machine Learning, Natural Language Processing, Explainable AI, Human-Centered AI.
- Master Thesis: "Disentangling signaling pathway crosstalk by universal differential equations".
- Awarded Deutschlandstipendium for high academic results for the program duration.

Canadian Institute of Technology   Oct. 2017 – Jan. 2021
Bachelor of Science in Computer Engineering   *Tirana, Albania*

- Relevant Coursework: Database Systems, Software Engineering, Java Programming.
- Bachelor Thesis: "Predicting Autism Spectrum Disorder with ML Classification Algorithms"
- Full Ride Scholarship for the duration of studies for high academic results.

Projects

Master Thesis - UDE-based modeling of crosstalk | *Python, JAX, PySR, matplotlib, Git*   **Dec. 2025**
- Trained hybrid mechanistic-ML models (Universal Differential Equations) to learn unknown biological interactions (crosstalk) from time-series data.
- Applied symbolic regression (PySR) to extract mathematical expressions from neural network components.
- Evaluated the approach through both synthetically-generated data and real experiments.
- Built an end-to-end JAX pipeline for UDE training, model interpretability and evaluation.

Chemotherapy Resistance Predictor | *PyTorch, Matplotlib, Pandas, Git*   **Mar. 2025**
- Trained a Multi-Head Attention Network for predicting chemotherapy resistance based on proteomics data.
- Compared results with a baseline neural network using Matthews Correlation Coefficient.

News Toxicity Classifier | *HuggingFace, Weights & Biases, transformers, tiny-bert, streamlit*   **Jun. 2024**
- Fine-tuned BERT-Tiny Transformer for news headlines toxicity classification.
- Logged the training and testing metrics in Weights & Biases, and built a Streamlit-based UI to use the model.

Poki - Autism Detection Platform | *Python, Django, scikit-learn, onnx*   **Jan. 2021**
- Developed a Django-based web application for parents of children with Autism Spectrum Disorder.
- Trained an ML classifier to predict ASD in children with a 96% accuracy.

Other

- **Languages: English** - Fluent (C1), **German** - Intermediate (B1)
- **Hobbies:** Song Writing, Graph Design, Video Making