David Podolskyi

Experienced Data Scientist and ML/Data Engineer specializing in data mining, predictive modeling, IoT, and advanced AI systems like Large Language Models (LLMs) and Retrieval-Augmented Generation (RAG). Proven expertise in optimizing ML training and inference for web applications, leading cross-functional teams, and driving strategic projects in diverse, interdisciplinary, and multicultural settings.

WORK EXPERIENCE

Tech Consultant - ML & Software Engineering

AISBACH, Munich, Germany

Developed Large Language Model (LLM)-based applications for customer support, legal document analysis, lead generation, and investment insights.

Working Student, Al Prototyping & Development Sep 2022 - Jan 2024

Infineon Technologies AI CoE Team, Munich, Germany

- Identified and drove AI/ML integrations for manufacturing alongside cross-functional teams;
- Optimized Wi-Fi module performance, reducing energy use and improving • connectivity through Deep Learning (PyTorch, MLflow, HyperOpt), statistical inference, simulations, and few-shot learning.

Working Student, Data Engineering – IoT Systems

Expleo Group, Munich, Germany

- Collaborated with the BMW IoT team to implement Python, Java, Docker, Kubernetes, and Big Data stack solutions for processing and analyzing data from **self-driving cars**. Developed a **Dash** Application;
- Specialized in IoT systems, specifically automotive driving and speed sensors •

Data Engineering & Science Consultancy

Turtle GmbH, Munich, Germany

- Assisted TURTLE with integrating Machine Learning-based solutions into their current production pipeline;
- Deliverables: Automated Training & Testing Pipeline, Interactive Evaluation Dashboard, "Al-readiness and Data Improvement" Report.

Junior Data Scientist and ML Engineer

Al Driller, Houston, Texas

- Enhanced excavation activity prediction algorithm DNNs models, resulting in a 27% increase in precision alongside the existing analytical models;
- Boosted production pipeline throughput for exploration sites by 23% via custom data-transformation pipelines.

EDUCATION

Bachelor's Thesis @ Harvard Medical School

Harvard Medical School, Boston MA, USA

Topic: "Enhancing Intraoperative Registration for Neurosurgical Navigation via Cross-Modal Inverse Neural Rendering"

Bachelor of Science – Information Systems

Technical University of Munich, Germany

- Report Paper: "Evaluating Test Data Quality by Measuring Latent Space Coverage, Density, and Sparsity with Deep Neural Networks."
- Seminar Paper: "Protecting the Grid from Wildfires through Data Analytics."

CONTACT

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- podolskyi.io

SKILLS

ML Engineering:

- Tensorflow 2.0 (Keras, core, Tensorboard, addons)
- PyTorch (MONAI, BoTorch)
- MLflow
- HyperOpt
- CUDA Toolkit

Data Engineering:

- Docker, Kubernetes
- Spark
- ELK (Elasticsearch)
- PostgreSQL, MongoDB

Other Frameworks:

- Python (FastAPI, sci. pack)
- Golang, Kotlin, Java, R

Academia:

- Research
- Mathematics (Statistics, Differential Geometry, ML, Information Theory, Optimization. Computer Vision)
- Efficient Prototyping
- Presentation, Organization, Adaptability

Languages:

• English, German, Ukrainian

PROJECTS AND ENGAGEMENTS

- President of TUM.ai leading Al initiative in Europe (2022 - 2024)
- Developed a Decentralized Help Hotline for Ukrainian refugees
- Speaker at TUM Global Week TUM.Africa
- Organized Al Summit 2023 in Munich
- Speaker at TUM **Dies Academicus** 2023

Oct 2020 - Present

Apr 2024 - Sep 2024

Aug 2020 - Jan 2021

Feb 2024 - Jun 2024

- Mar 2021 Sep 2022

Mar 2022 – Jun 2022