Patrick Ruoff

Curriculum Vitae

Peter-Paul-Althaus Str. 15
Germany, 80805 Munich
✆ +49 176 45945423
✉ contact@ruoff.dev
🖰 patrick.ruoff.dev

Relevant Experience

8/2024 -
3/2025
Cloud Data Architect: diconium data, Freelance, Munich.
Part of agile team (8 members) providing cloud data analytics platform for business departments of world-leading automotive OEM. Migrated cloud infrastructure within AWS with Terraform. Challenged architecture of existing data pipelines, data models, and cloud services. Improved on findings and implemented new pipelines.
Skills: AWS, Redshift, Glue, Terraform, Python, Tableau, CI/CD, PySpark, Collibria

11/2022 -
8/2024
Lead Data Engineer: Swiss Foreign Trade Statistics, Freelance, Bern.
Part of two agile teams (18 members) providing data analytics platform for customs and border security business departments. Redesigned ETL architecture for ∼60 data products processing customs and personal data. Improved speed by factor of ∼100. Technical lead in decision making with architects and code review for 12 developers.
Skills: Python, Airflow, PySpark, dbt, Iceberg, SQL, NiFi, Kubernetes, AWS S3, Kafka

1/2022 -
9/2022
Senior Data Engineer: industrial machine manufacturer, inovex, Munich.
Part of agile team (∼30 members) providing cloud data platform for industry leading business departments. Designed and implemented architecture for ∼30 ETL applications and APIs processing global IoT data on a terabyte scale. Deployment of various managed services in hybrid cloud setup. Enablement of client developers. Optimized architecture to save ∼4000€ per month. Knowledge-Sharing for up to 60 colleagues.
Skills: Python, Azure, Databricks, PySpark, SQL, NiFi, Kubernetes, Shell, CI/CD, Terraform

6/2020 -
12/2021
Data/ML Engineer: kitchen appliance manufacturer, inovex, Munich.
Long-term engagement with multiple roles for industry leading commercial kitchen appliance manufacturer. Contributed to several agile teams (1–10 members), delivering cloud-based and on-premises data and ML solutions for globally distributed IoT data. Designed and implemented scalable ETL and machine learning architectures processing data on terabyte scale. Realized secure and maintainable dashboarding applications with focus on sensitive laboratory data and clean software principles across 11 Python projects. Migrated ETL pipelines and web APIs from on-premises to Docker-based services on Azure. Designed and implemented on-premises ETL pipelines and web APIs for ML applications. Took full responsibility from raw data collection to processing and visualization, including deployment. Introduced and optimized DevOps practices with CI/CD pipelines and testing. Served as main contact for stakeholders and enabled client developers through knowledge sharing.
Skills: Python, Azure, Databricks, PySpark, SQL, Shell, Terraform, Elasticsearch, Kibana

9/2019 -
4/2020
Guest Researcher, Carnegie Mellon University, Pittsburgh.
Designed and realized data collection pipeline for thermal comfort-related data including biosignals and occupant controls. Optimized, deployed, and evaluated machine learning models for infrared heating panel control with focus on interpretability. Reduced command frequency by 79% and increased thermal comfort to 89%. Published findings (paper, code, data).
Skills: IoT, Python, scikit-learn, fastai, Swift, Cloud Computing, Expainable AI

10/2018 -	**Data Scientist: Student Job**, INOVEX, Munich.
5/2020	Evaluated machine learning frameworks with focus on tabular data sets.
	Skills: extensive Python programming, scikit-learn, TensorFlow, PyTorch, Parquet

Studies

10/2018 -	**Data Engineering & Analytics, M.Sc.**, TECHNICAL UNIVERSITY MUNICH.
9/2019	*Grade when canceled: 1.9*
	Focus: data engineering, machine learning, distributed systems, deep learning
10/2016 -	**Informatics, M.Sc.**, TECHNICAL UNIVERSITY MUNICH.
4/2020	*Final grade: 1.3*
	Focus: software engineering & architecture, agile project management, machine learning
10/2017 -	**Study Abroad**, MULTIMEDIA UNIVERSITY MALAYSIA.
3/2018	Focus: software engineering, software quality
10/2013 -	**Informatics, B.Sc.**, TECHNICAL UNIVERSITY MUNICH.
10/2016	*Final grade: 2.3*
	Focus: software engineering, machine learning, business analytics, database systems

Skills

Coding:	*Expert*: Python, SQL, Shell
	Extended: JavaScript, R, Java, C#
Azure:	Databricks, Synapse, Data Factory, Functions, ARM, Blob, ADLS, Queues, Fileshare, DevOps, SQL DB, Cosmos DB, App Services, Container Instances, Key Vault, Event Grid, VNet, Logic Apps, Active Directory, Event Hub, Stream Analytics
AWS:	Databricks, Redshift, Athena, Glue, Lambda, SF, S3, VPC, EC2, ECS, EMR
Others:	*Expert*: Terraform, Databricks, PySpark, Spark Streaming, Airflow, dbt, Iceberg, Delta, NiFi, Kafka, Docker, CI/CD, Scrum, SAFe, Clean Code, RDBMS, NoSQL, MongoDB, Elasticsearch, Kibana, Atlassian Stack, fast learning
	Extended: Kubernetes, Tableau, PowerBI, Grafana, FastAPI

Awards & Certificates

11/2023	**Databricks Certified Data Engineer Professional**, DATABRICKS.
11/2022	**Azure Data Engineer Associate**, MICROSOFT.
11/2022	**Associate Developer for Apache Spark 3.0 (Python)**, DATABRICKS.
1/2021	**Data Engineering Nanodegree**, UDACITY.
10/2019 -	**DAAD IFI scholarship**, GERMAN ACADEMIC EXCHANGE SERVICE.
4/2020	For research stay of highly qualified young German researchers in the field of artificial intelligence at excellent partner institutes abroad.