Dhanunjaya Elluri Thimmaraju

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PROFILE SUMMARY

Data Scientist and Machine Learning Engineer with 5+ years of applied data science, ML, and software development experience. Open Source at Narwhals and NannyML. Advanced knowledge of software design patterns, fluent in Python, strong in object-oriented and functional programming, and technical writing. Excels at applying AI/ML theory to commercial development in high-volume data processing, visualization, and model development.

SKILLS

Languages:	Python, R, SQL, C/C++, Shell Scripting
Cloud/DevOps:	Azure, AWS, Databricks, Docker, Kubernetes, Git(CI/CD), Terraform
Database:	MySQL, NoSQL, PostgreSQL, MongoDB, Redshift, Cassandra, BigQuery
BI/ETL Tools:	Power BI, Tableau, Airflow, Kafka, Azure Data Factory, Grafana
Frameworks:	PyTorch, TensorFlow, MLflow, Flask, Langchain, LlamaIndex, HuggingFace, Scikit-Learn, NLTK, Pytest

WORK EXPERIENCE

Karl STORZ SE & Co. KG — **March 2025 – Present**
MLOps Engineer — *Tuttlingen, Germany*

- Contributed to the development of Surgical Data Platform (SDP), ingesting video data from hospitals via DataLogger devices and WebUpload tools; orchestrated complex ETL workflows using Apache Airflow to extract frames and enrich metadata (e.g., ICG signals) via Azure ML inference endpoints.
- Developed and maintained a robust centralized MLOps pipeline for the SDP, ensuring seamless integration of ML models into production environments, enhancing the platform's capabilities in real-time surgical data analysis.
- Deployed and managed Apache Airflow on Azure Kubernetes Service (AKS) to run scalable, production-grade data pipelines for video and metadata processing.
- Built a CLI-based internal ml-utils package to streamline frame-based data handling for data scientists, significantly reducing onboarding time and simplifying large-scale data flows.
- Co-led infrastructure management for both Data and ML platforms, aligning closely with Security teams to meet enterprise compliance standards.

Validaitor UG — **January 2024 – December 2024**
Machine Learning Engineer — *Karlsruhe, Germany*

- Mentored a team of 3 junior developers. Participated in code reviews, resulting in a 30% increase in milestone completions and a 20% decrease in coding errors.
- Built adversarial attack pipelines for testing LLM models to mitigate bias, fairness, privacy, and other safety measures.
- Optimized autoscaling mechanism of celery workers for sending millions of prompt requests, reducing latency by 70% and cutting ECS costs by approx. €9000 per month.
- Designed and built an efficient ETL pipeline in AWS using Airflow & Spark to validate, and transform 2 TB of data.
- Transformed existing Validaitor LLM platform into GDPR, ISO 27001 complaint, and managed platform infrastructure in AWS and Azure using Terraform, delivering 99.9% uptime.

Munich RE — **October 2022 – December 2023**
MLOps Engineer Intern — *Munich, Germany*

- Development and operation of in-house MLOps platform for compliant one-click hosting of ML models reducing €0.5M+ operational costs in Q2 and Q3 of 2023.
- Proposed and integrated both Databricks & Dataiku Feature Stores into MLOps platform enabling data versioning, governance, and optimized data pipelines.
- Built an NLP platform for automating the underwriting process, increasing time to delivery of Claims and Underwriting use cases by 70%.
- Built and integrated company-specific RAGs with re-ranking in Databricks enhancing policy issuance processes with an 80% improvement in efficiency and accuracy.

Technische Universität Dortmund — **August 2021 – October 2022**
Research Assistant — *Dortmund, Germany*

- Conducted comprehensive statistical analysis and applied clustering and real-time anomaly detection on time series sleep data successfully diagnosing sleep disorders and sleep apnea in 1000+ patients.

- Research and development of advanced pruning techniques to select the best subset of a trained ensembles to minimize memory footprint and maximize accuracy.
- Developed a content and collaborative-based recommendation system for TU Dortmund Bibliothek, improving the recommendation of similar e-books and e-journals from extensive collections.

Tata Consultancy Services Ltd **June 2018 – May 2021**
Data Scientist *Bangalore, India*

- Led client consultations, transforming complex datasets into actionable strategies, culminating in a 70% increase in customer satisfaction.
- Created an information retrieval pipeline from PDFs using Graph Neural Networks, and BERT for text analysis.
- Saved ∼500 hours in document processing by creating an efficient NER API using Python, TensorFlow, and MLflow, automating document annotation.
- Optimized supply chain operations with a cold start problem with DeepAR model resulting in a 45% improvement in inventory turnover, and a 25% decrease in stockouts.
- Conducted strategic A/B tests for one of Fortune 500 client's platforms, resulting in a 30% uplift in conversion rates, and a 20% rise in average order value.
- Designed and executed ETL pipelines with 1M+ transactions every day and created Power BI dashboards for enhanced monitoring and reporting.

EDUCATION

Technische Universität Dortmund **April 2021 – March 2024**
M.Sc. in Data Science *Dortmund, Germany*

Sri Siddhartha Insitute of Technology **August 2014 – June 2018**
BE in Computer Science *Tumkur, India*

LANGUAGES

English: C1 (Fluent)
German: A2 (Improving)
Telugu & Hindi: C2 (Native)