Nick Chandler

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US Citizen | *Relocating to US (Sept 2026)*

Education

- **Master of Science in Data Science** — Berlin, Germany
  Berliner Hochschule für Technik (BHT) — *Oct. 2024 – Present*
- **Bachelor of Science in Computer Science** — Bellingham, WA
  Western Washington University – GPA: 3.96 — *Sept. 2020 – June 2024*

Skills

Languages/DevOps: Python, SQL, R, Java, K8s, Docker, Helm, Git, LLM Orchestration (vLLM), Linux
Data/ML: PyTorch, TensorFlow, Polars, Pandas, Scikit-learn, MySQL, PostgreSQL, Spark, Exasol
Core Expertise: MLOps (CI/CD), Distributed Systems, Time-Series, IML/XAI, Applied Statistics

Experience

- **Data Science Researcher (MLOps & Engineering)** — Berlin, Germany
  Calgo Lab – Berliner Hochschule für Technik — *Feb. 2025 – Present*
  - Engineered distributed experimental pipelines using a **Kubernetes** cluster to investigate errors in tabular data.
  - Co-developed **tab-err** and implemented **CI/CD via GitHub Actions** to automate testing and linting.
  - Deployed and maintained dockerized web-demos and LLM applications (with vLLM) on Nvidia GPUs.
- **Computer Science Researcher (Deep Learning)** — Bellingham, WA
  Hutch Research – Western Washington University — *March 2023 – June 2024*
  - Built an end-to-end Deep Learning pipeline using **PyTorch** to predict binary star system variables.
  - Optimized data processing of large astronomical datasets using **NumPy**, reducing training data preparation time.
  - Collaborated with a 4-person engineering team to standardize code quality and reproducible model training.
- **Mathematics Researcher (Statistical Analysis)** — Bellingham, WA
  Western Washington University — *Oct. 2022 – June 2024*
  - Developed a novel class of two-sample non-parametric statistical tests using **R** for data analysis.
  - Presented findings at the 2024 Joint Mathematics Meetings and 2023 SIAM PNW Conference.
- **Mathematics Tutor** — Bellingham, WA
  Western Washington University — *Sept. 2022 – June 2024*
  - Tutored advanced topics including Multi-Variable Calculus, Linear Algebra, Probability, and Statistics.

Publications

- **Towards Realistic Error Models for Tabular Data** | DOI: 10.1145/3774914 — 2025
  - Integrated **tab-err** into a **Kubernetes** framework distributed with **Helm** to run experiments for an **ACM JDIQ** publication.
- **MechDetect: Detecting Data-Dependent Errors** | DOI: 10.1109/DSIS67228.2025.11390600 — 2025
  - Architected and experimentally evaluated a novel machine learning framework for characterizing error mechanisms in tabular datasets. Published in **IEEE** explore for DSIS 2025.

Projects

- **Fullstack Air Quality ML Pipeline** | *Kubernetes, Spark, Docker, Streamlit*
  - Architected a scalable ETL pipeline to scrape, store, and analyze Berlin PM2.5 sensor data daily.
  - Used **Kubernetes** to deploy PVC-backed storage to serve as a raw data lake.
  - Implemented **pySpark** jobs to aggregate raw CSVs into partitioned Parquet files for downstream ML.
  - Visualized daily spatiotemporal forecasts using a Streamlit frontend.
- **AOL & Weather Analytical Engine** | *SQL, Exasol, Python, OLAP*
  - Developed an analytics suite on an **Exasol** database to integrate 20M+ search records with NOAA climate data.
  - Engineered time-series **interarrival** analysis and **ROLAP operations** using advanced SQL window functions, multi-dimensional joins, and views.