

Richhiey Thomas

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Dynamic and results-oriented software engineer with a background in data science and software development. Proven expertise in modern programming languages such as Python and C++, coupled with hands-on experience in developing and optimizing deep learning models, ETL pipelines, and real-time audio processing systems. Passionate about developing Generative AI workflows to solve complex problems and drive impactful solutions.

RELEVANT SKILLS & PROJECTS

- **Programming:** Python, Modern C++, SQL, Typescript, Bash
- **Python Libraries:** Pandas, Numpy, Matplotlib, PyTorch, Tensorflow, Scikit-learn, FastAPI
- **Tools/Platforms:** AWS, Docker, CMake, PySpark, Kafka, Airflow, React, Next.JS, Git
- **GenAI tools:** HuggingFace Transformers, LangChain, Supabase, Vercel AI SDK
- **Relevant projects:** GenAI playground with an interface for RAG and Generative UI

PROFESSIONAL EXPERIENCE

PhonicScore GmbH

Mumbai, India (Remote)

Data Scientist

Mar 2023–Present

- Led the project lifecycle to develop a robust drums transcription model - developed machine learning pipelines for training and evaluation of a Conv-LSTM model which increased predictive performance by 32%.
- Interfaced with clients to setup the annotation standard for audio and musical event data and enforced manual and automated data quality checks to ensure high-quality data delivery.
- Optimized Tensorflow models for execution on mobile devices and deployed them into a C++ inference engine. Incrementally improved the post-processing algorithms to handle edge-cases reported by clients and improve the end user experience.

LearnField GmbH

Berlin, Germany (Hybrid)

Data Engineer

Jul 2022–Feb 2023

- Identified and resolved latency correction issue in a real-time C++ audio engine running a CNN model - this led to improved and accurate prediction results for 20% of active users.
- Refactored and optimized ETL pipelines to ingest audio and annotations data generated by 30k daily active app users from an S3 data-lake and store it on an AWS EFS for downstream analysis and dataset curation.

Data Science Intern

Oct 2021–Jul 2022

- Assembled a model compression pipeline and reduced model size of transformer by 4.8x with minimal reduction in evaluation metrics through selective attention-head pruning, fine tuning, and weight quantization.
- Thesis Report

AILab @ OVGU Magdeburg

Magdeburg, Germany

Research Assistant

Mar 2019–Jul 2021

- Explored and implemented use cases of deep learning models in music generation and participated in applied research challenges like the AI Song Contest 2020.
- ISMIR explorer: Upgraded a Django webapp for an academic document explorer to automate data pre-processing and model training pipelines for topic modelling and generating document embeddings and deployed it as a Docker container.

Mirraw Online Services Pvt. Ltd.

Mumbai, India

Software Developer

July 2017–August 2018

- Increased average order value by 10% for customers on the Mirraw shopping e-commerce website by implementing process flows for cart upselling features.

CERTIFICATIONS

AWS Certified Machine Learning - Specialty

- Validates expertise in building, training, tuning, and deploying ML models on AWS.

Jul 2024

AWS Certified Data Engineer - Associate

- Validates expertise in designing data models, managing data life cycles, and ensuring data quality on AWS.

Aug 2024

EDUCATION

Otto-Von-Guericke University, Magdeburg
Master of Science in Data and Knowledge Engineering

Magdeburg, Germany
Oct 2018–Jun 2022

University of Mumbai
Bachelor of Computer Engineering

Mumbai, India
Jun 2013–Jun 2017