Daniel Thero

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Technical skills

Languages: Python, Go (Golang), SQL, C++, C, Java, R, CUDA, Typescript, JavaScript
Tools/Frameworks: Keras, PyTorch, TensorFlow, JAX, Hadoop, Redis, Pytest, Django, Flask, React
Other: Git, Linux, AWS, GCP, CI/CD, Conda, Bash, Jira, Jenkins, Firebase, Agile

Experience

Software Engineer **Mar. 2025 – Present**
Mobian *New York City, NY, United States*

- **End-to-end technical owner of 3 REST APIs** in **Go** and **Python**, including **greenfield** and **client-facing ML** services; deployed on **ECS Fargate**, monitored with **Sentry**/**CloudWatch**.
- Designed **ETL modeling pipelines** that process **16 billion** monthly ad impressions from **S3 logs**
- Maintained multiple **PostgreSQL (RDS)** production databases, running frequent **schema migrations** and periodic data **normalizing/sanitizing**.
- Built an **SQS polling system** to reduce average **retry latency** by **62%** for failed API queries.
- **Led consultations with major enterprise clients** to define requirements, built and shipped **custom features**, and delivered **data-driven analytics** to inform product strategy.

Machine Learning Test Engineer, Intern **Jan. 2024 – Apr. 2024**
Groq *Mountain View, CA, United States*

- Automated **35% of all SQA testing** with **Python**, targeting **regression** and **performance** tests
- Designed **inference accuracy tests** for **ML models**, including **Facebook OPT**, **BERT Large**, **GoogleNet**, and **FFN**, as well as **top-5 error classification** for **image models**.
- Patched an exposed **OAuth token** in a **Google Sheets API call** by using **BigQuery SQL**.

Defensive Cyber Operations Specialist, Intern **Jan. 2023 – Apr. 2023**
Department of National Defense *Gatineau, QC, Canada*

- Applied an **ELK stack** on **Docker** with custom **Grok** patterns to aggregate **aircraft error logs**.
- Configured a **Logstash** pipeline to store data with **Elasticsearch**, modeled with **Kibana**.

Software Engineer (RTOS), Intern **May 2022 – Aug. 2022**
Huawei Technologies *Kanata, ON, Canada*

- Optimized **IPC latency by 6%** in the **HarmonyOS 4.0 Unix microkernel**, written in **C++**.
- Implemented an **RB-tree** for **thread-queueing** to speed up **mutex** unlock times to **log(n)**.
- Stress-tested **RPC scheduling** to measure bottlenecks with **nanosecond-accuracy**.

Embedded Software Developer, Intern **Sep. 2021 – Dec. 2021**
Ford Motor Company *Kanata, ON, Canada*

- Developed **C++** production code for **2022 Ford vehicles**; used **Terraform** and **GoogleTest**.

Projects

Fine-Tuned LLM Code Translator using GPT-2 (Python, PyTorch, Transformers)

- A causal language model that converts code from Python to JavaScript, focusing on idiomatic structure. Uses the Hugging Face Transformers library, tracked with TensorBoard.

Deep-Learning Classifier for Insulator Defects (Python, Keras, Scikit-learn, NumPy)

- A supervised Convolutional Neural Network using a pretrained Keras model and a TensorFlow backend to grade the condition of preprocessed images of insulators with 99.6% accuracy.

Data Miner for Recommendation Engine (Python, SQL, SQLAlchemy, Pandas, Kaggle)

- Finds similar movies using features extracted from a SQL database and vectorized text similarities.

Education

University of Waterloo **Sep. 2019 – Aug. 2024**
BASc Computer Engineering, Honours, Co-op, GPA 3.7 (with Distinction) *Waterloo, ON, Canada*