Jules M.

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1+ yrs building high throughputs and low latency systems spanning **NLP**, **GNNs**, Large Scale Recommenders.
Scripting:- MATLAB, Typescript, Bash. **Backend:**- Python, Scala; Spark, **Cloud:** Azure, AWS. **Infra:** HPC, Slurm, Bash, UNIX

EDUCATION

Master of Science, Business and Data Analytics, **Tennessee Wesleyan University** **2026**
Courses: Business Intelligence & Communication, Data Visualization, Artificial Intelligence, Machine Learning

Master of Science, Computer Engineering, **University of Memphis** **2020**
Courses: Advanced Algorithms, Image Processing, Linear Optical Systems, Machine Learning, Computer Vision, Statistics, Optimization
Proposed PySIM: a U-Net model for reconstructing 3D images from 2D layers captured from Structured Illuminated Microscopes

- Built TunableSIM GUI with C++ with Matlab's Engine API for **C/C++** and tested new features. Presented at SPIE Conference 2021
- 1st place in 2021 and 2020, at the University Research forum, two years in a row and regularly attended ML conferences.

RELEVANT EXPERIENCE

Contra, Software Engineer Intern, San Francisco CA May 2023 – 2024

- Built cross-modal **home ranker** (two-tower recall + cross-attentive re-ranker over photos, text, and structured features; Feast/Faiss/Triton) that drove **+5–8% sessions**, **+7% bookings** in a 14-day A/B across ≥2M sessions.

Microsoft, Applied Scientist Intern, Bellevue WA Aug 2021 – Mar 2023
Embedding based Ads retrieval at Audience Intelligence Platform Team

- Built multi-task GNN **embedding models** serving **2B** global users, **1B Microsoft** users & **50B events** to personalize/ target ads for CVR-CTR prediction tasks with user behaviors, Ads features + Ads serving, User+Ads ranking service, DeepGNN, SQL, Spark, Kafka

Income Targeting Product & Microsoft Shopping Team

- Spearheaded and launched Bing Ads' household-income targeting pilot—merging label-proportion learning, hybrid ZIP fallback, CLM bias correction, and mixed-effects intercepts—within a PyTorch mini-batch KL-divergence pipeline processing **50 M+** monthly impressions; delivered **85 % precision** in the Top 20 % income segment, **+22 % CTR** lift for finance campaigns, **sub-100 ms** p99 inference (< 70 % latency), and real-time bid adjustments that **boosted ROI by 18 %** on Top 10 % income audiences
- Deployed hybrid ZIP-level fallback to further extend coverage in low-traffic ZIPs by **40 %**, improving recall for income-segment inference by **25 %** versus pure ZIP-based targeting across all income buckets (Top 10 %, 11–20 %, … Lower 50 %)

IBM, Software Developer Intern, Poughkeepsie, NY Oct 2020 – Sep 2021
Hyper Protect Data Controller at Z/OS Performance Team, IBM Z,

- Spearheaded CI/CD–driven **performance regression tests** for HPDC via Jenkins and Gatling, automatically validating end-to-end encryption and masking across **25 TB** of synthetic PII datasets nightly and alerting on any sub-5% throughput degradation.
- Built a real-time telemetry pipeline for HPDC with OpenTelemetry, Apache Kafka, and Grafana, enabling sub-5-minute detection of encryption errors and latency spikes and driving a **40% reduction** in incident MTTR.

BEDC Electric Plc, **Software Engineer, Graduate Trainee,** Benin, NG Nov 2016 – June 2020
Customer Data Infrastructure at Platform Team

- Built and launched a Django REST API paired with a React/Chart.js dashboard on PostgreSQL—used by **200+ field engineers** to monitor daily usage deltas, resolve ~**1500+ tickets/month**, and perform B2C triage, cutting average resolution time by **40 %**
- Delivered an AWS Lex–powered chatbot integrated via Lambda on the customer portal—handling **300 K+** monthly interactions, **25 %** of support calls, and storing session data in DynamoDB before migrating to Couchbase for sub-50 ms read performance
- **Analyzed** multi-dimensional time-series data with PySpark and Pandas to engineer features for an LSTM-based anomaly detector, identifying **3 500+** high-reactance usage outliers per year and preventing **$500 K** in avoidable energy costs via automated alerts.