Jiangyue Mao

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Professional Experience

Machine Learning Engineer, Raydiant, Remote (Group Layoff)   **Aug 2024 – Present**

- Delivered over **4000+ lines** of production-ready code within 4 months in a fast-paced startup environment
- Developed and tested new endpoints for the data reporting API using **Golang**, enabling rapid multi-file data download with optimized AWS Redshift pagination for data retrieval within **3 seconds**
- Built robust **ETL pipelines** using **AWS S3, Athena, Lambda, Glue, EventBridge, and Terraform**, enhancing report quality through rigorous data validation with cross-functional collaboration
- Leveraged **Amazon Bedrock** to develop a **generative AI** chatbot that assists customers by answering frequently asked questions from the knowledge base, improving support efficiency by **33%**

Software Development Engineer, Amazon Web Services, Seattle, Washington   **Jul 2023 – Jul 2024**

- Built automated on-call querying and monitoring API for AWS Aurora (relational database service built for the cloud), **increasing on-call efficiency by 19.6% and reducing downtime by 15.3%**
- Established Profile Guided Optimization on distributed architectures and measured their performance with benchmarks, cutting read and write latency by **13.4%**
- Enhanced system security by implementing strong **encryption** practices using **C++** and **Git**, **reducing data breaches by 87%** and increasing customer trust
- Supported the development and deployment of **4 machine learning models** and modernized outdated code, improving system stability and increasing runtime efficiency by 7.6% with tools like **Java and Python**
- **Reduced data retrieval time by 12.5%** and improved system efficiency with optimized **SQL** queries

Data Scientist, Rocket Mortgage, Detroit, Michigan   **May 2022 – Jul 2023**

- Experimented with Multitouch Attribution models, applying **Explainable AI (XAI)** method – SHAP, **ML models,** and Bayesian modeling using **AWS Sagemaker and EMR, improving model recall by 16.8%**
- Analyzed clients' opt-out journey to maximize spend effectiveness, tuning hyper parameters on **MLOps**
- Conducted **A/B testing** and **causal inference analysis** on commercials, projecting a 3.1% increase in views
- Received **4 prizes out of the 5** for Hack Week projects, including Biggest Impact, Most Innovative, Best Group Collaboration, and Best Presentation award

Certifications

- **AWS Certified Solutions Architect – Associate (Dec 2024)**

Education

University of Michigan, Ann Arbor, Michigan, MSc Data Science

- Leadership and Research Experience: Student Leadership Board at Michigan Institute for Data Science, Architecture + Artificial Intelligence Laboratory, Graduate Student Instructor for STATS 250

University of Toronto, Toronto, BA (Honours), Architecture, Statistics, and Mathematics

- Awards: Dean's List Scholar 2020 & 2021, graduated with High Distinction

Skills

- **Programming Languages:** Python, Java, Go, C++, MongoDB, SQL, Shell scripting, HTML, CSS, Javascript
- **Libraries:** Django, Pandas, NumPy, Scikit-Learn, Echo, STD libs, JDK, Node.js, Apache Spark, Spring Boot
- **Frameworks & Tools:** AWS, CGP, Azure, Docker, Kubernetes, Terraform, Git, CI/CD, Jira, Databricks
- **Methods:** Machine Learning, Experimental Design, Big Data Processing, ETL