

MOTHEO TREASURE PUSO

Arlington, TX | +1 (682) 226-0897 | txp9238@mavs.uta.edu | [LinkedIn](#) | [Portfolio](#) | [GitHub](#)

MS Computer Science candidate specializing in distributed systems, backend engineering, and cloud infrastructure for large-scale data & ML systems

EDUCATION

University of Texas at Arlington, College of Engineering

Arlington, TX

Master of Science in Computer Science | GPA: 3.8

August 2025 - Expected May 2027

Relevant Coursework: Distributed Systems, Machine Learning, Cloud Computing, Software Testing

Michigan State University, Eli Broad College of Business

East Lansing, MI

Bachelor of Science in Computer Science; Bachelor of Arts in Finance

Graduated August 2024

SKILLS & TOOLS

- Big Data: Apache Spark, Kafka, Hadoop, Databricks, GraphFrames, Pregel
- Backend: Flask, FastAPI, Django, LangChain, gRPC, REST APIs, SQLAlchemy
- Cloud & DevOps: AWS (EC2, EKS, Lambda, API Gateway, IAM, S3, RDS, VPC, CloudWatch), Terraform, Docker, Kubernetes
- Software Engineering: Git, CI/CD, Agile (Scrum), Distributed Systems, Microservices, Test Automation
- Databases: PostgreSQL, pgvector, MongoDB, MySQL, Redis
- Languages: Python, Java, Scala, TypeScript, SQL

RESEARCH & SELECTED PROJECTS

Research Thesis: Parallel Substructure Discovery in Large Graph Databases

January 2026 - Present

- Designing distributed algorithms for frequent subgraph (substructure) discovery on large-scale graph datasets
- Implementing graph mining pipelines using Apache Spark to parallelize candidate generation
- Investigating scalable graph mining techniques to reduce computational complexity on massive datasets

Real-Time Anomaly Detection Pipeline on Distributed Data

September 2025 - April 2026

- Engineered a Spark Structured Streaming and Kafka pipeline processing 10M+ events/hour on a Hadoop cluster
- Optimized preprocessing time by 68% through distributed MapReduce feature engineering on 50GB+ log datasets
- Integrated Isolation Forest with Spark ML using Scala for sub-500ms anomaly detection

Distributed Library Management System

May 2025 - July 2025

- Built fault-tolerant microservices using gRPC, SQLAlchemy, PostgreSQL, Docker, and Terraform, handling 3x peak load
- Implemented Raft-based coordination across a 5-node cluster, sustaining availability through simulated node failures

WORK EXPERIENCE

Ally Financial

Detroit, MI

Software Engineer Intern (University - Industry Collaboration)

January 2024 - May 2024

- Engineered a RAG pipeline (LangChain + vector embeddings) indexing 1,800+ pages of SEC filings and earnings transcripts, cutting lookup time from manual search to seconds
- Built a batch ingestion pipeline embedding 3,500+ document chunks, refreshing the knowledge base each reporting cycle
- Developed and deployed containerized REST APIs on AWS EKS with S3-backed storage, enabling reliable production-grade inference

MSU - Student Government Central Staff

East Lansing, MI

Director of Technology

May 2022 - June 2023

- Developed the MSU news application (Spotlight) using React Native and Python, achieving 5,000+ downloads
- Implemented Grafana dashboards with real-time alerting, enabling proactive outage detection ahead of user reports
- Managed platform infrastructure serving 30,000+ students with Git version control and CI/CD workflows

Altair Engineering Inc

Troy, MI

Software Engineer Intern

May 2022 - December 2022

- Leveraged Monarch and Python to automate data validation processes, reducing errors by 22%
- Optimized Pandas and NumPy data workflows for technical demos, improving efficiency by 35%
- Developed pytest scripts to identify performance bottlenecks, enabling faster runtimes and more seamless client-facing demos

ACCOMPLISHMENTS

- Certifications: AWS Certified Solutions Architect - Associate
- National Top Achievers Scholarship, Undergraduate and Graduate Level, Botswana