

Alex McIntosh

Data Scientist & AI Engineer

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PROFESSIONAL EXPERIENCE

Data Engineer Associate - *Optum*

Aug 2024–Present

- Refactored ETL pipelines for scalability and reusability, cutting failure rates from double digits to near-zero
- Mentored an intern team that won first place in an international Shark Tank competition with an agentic AI solution
- Design and implement a system of agents using A2A, MCP, and ADK for enterprise-wide automation
- Train and deploy ML models to evaluate generative AI system performance with automated scoring pipelines
- Conduct adversarial testing and benchmark analysis for robustness, safety, fairness, latency, and explainability

Data Science and Engineering Associate - *Optum*

Jul 2023–Jul 2024

- Built a time-series forecasting model to detect operational anomalies with >90% precision.
- Orchestrated multi-agent AI systems to perform statistical analysis dashboard generation
- Delivered a conversational AI self-service analytics solution
- Trained a state-of-the-art time-series model to forecast operation trend changes and detect anomalies
- Enabled observability into millions of updating claims records
- Evaluated ML models for accuracy, bias, and operational readiness

Software Engineer - *Constelleum LLC*

Mar 2020–Jul 2023

- Engineered adaptive control schemes enabling inclusive gameplay
- Automated client/server test pipelines
- Analyzed event log data to inform balance and engagement metrics

EDUCATION & PROFESSIONAL DEVELOPMENT

Master of Science in Computer Science - *Georgia Institute of Technology*
Machine Learning specialization

Expected Jul 2027

MicroMasters in Statistics and Data Science - *MITx*

Dec 2023

Bachelor of Arts in Physics - *Saint John's University*

Minored in Music and Mathematics • Phi Beta Kappa Honor Society Member • Men's Chorus President

May 2021

Microsoft Certified: Fabric Data Engineer Associate - *Microsoft*

Jun 2025

Microsoft Certified: Azure Fundamentals - *Microsoft*

Aug 2024

Azure Data Scientist Associate - *Microsoft*

Jan 2023

SKILLS & TECHNOLOGIES

Python • PySpark • PyTorch • TensorFlow • SQL • R (Programming Language) • Statistics and Probability • Data Science and Predictive Analytics • Natural Language Processing (NLP) • Data Visualization • Data Engineering • Git • Simulation • Docker • Microsoft Fabric