# ALEXANDER MCINTOSH

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## **WORK EXPERIENCE**

Optum Jul. 2023 - Present

**Data Engineer Associate** 

Aug. 2024 - Present

- Train and deploy machine learning models to analyze interactions with chat bots to improve user experience
- Maintain and enhance a generative AI virtual assistant that serves over 400,000 users
- Architect end-to-end data pipelines in Microsoft Fabric to enable business insights and observability into operations

### **Data Science and Engineering Associate**

Jul. 2023 - Aug. 2024

- · Orchestrated large language model multi-agent systems to perform statistical analysis and generate visualizations
- Deployed a self-service analytics bot with Semantic Kernel, JavaScript Azure Bots, and Python Azure Functions
- Automated job description comparison with a text-embedding model to reduce time and cost of acquisitions
- Trained a state-of-the-art time-series model to forecast trend changes and detect anomalies in operations
- Enabled observability into millions of updating claims records with Kafka streaming data
- Designed a framework to evaluate artificial intelligence systems on performance, accuracy, and bias

Constelleum LLC Mar. 2020 - Jul. 2023

Software Engineer Mar. 2020 - Jul. 2023

- Developed a physically accessible multiplayer video game written in GDScript, hosted on Digital Ocean
- Automated testing and validation of client and server computation
- Extracted, transformed, and analyzed event log trends to inform balanced game design

## **Stevens County Developmental Achievement Center**

Oct. 2021 - May 2022

**Employment Specialist** 

Jan. 2022 - May 2022

- Delivered employment training and services to Stevens County residents with disabilities
- Planned and executed employment programs, overseeing a team of 8 job coaches

Job Coach Oct. 2021 - Jan. 2022

- Coached 30+ individuals on job expectations and responsibilities
- Organized and led personalized enrichment activities for accessibility service recipients

#### **EDUCATION**

## Masters in Computer Science - Georgia Institute of Technology

**Expected May 2027** 

• Machine Learning Specialization | Deep Learning | Pytorch | Sci-Kit Learn

## **Statistics and Data Science MicroMasters - MITx**

Dec. 2023

• Statistical Modelling | High Dimension Analysis | Network Analysis | Simulation | Deep Learning | Pandas | Python

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

Dec. 2021

• Minors in Mathematics and Music | Phi Beta Kappa Key Holder | Men's Chorus President | 3.51 GPA

## **CERTIFICATIONS**

#### Azure Data Scientist Associate - Microsoft

Jan. 2023

• MLOps | Cloud Architectures | Distributed Computing | Databricks | PySpark | TensorFlow | MLFlow

#### Data Science Professional Certificate - HarvardX

Aug. 2022

• Data Wrangling | Data Visualization | Recommender Systems | Version Control | R | Tidyverse | ggplot2 | Git