

# ALEXANDER MCINTOSH

[mcintalmo@gmail.com](mailto:mcintalmo@gmail.com) • [mcintalmo.github.io](https://github.com/mcintalmo) • [linkedin.com/in/mcintalmo](https://www.linkedin.com/in/mcintalmo) • Minneapolis, MN

## WORK EXPERIENCE

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### Data Science and Engineering Associate - Optum

Jul. 2023 - Present

- Architect large language model multi-agent systems to perform statistical analysis and generate visualizations
- Deploy a self-service analytics bot with Semantic Kernel, JavaScript Azure Bots, and Python Azure Functions
- Automate document comparison with text embeddings to save hundreds of hours of labor annually
- Train a state-of-the-art forecast and anomaly detection model on key performance leading indicators
- Enable observability into billions of records and Kafka streaming data
- Evaluate artificial intelligence system output on performance, accuracy, and bias

### Software Engineer - Constelleum LLC

Mar. 2020 - Present

- Design a physically accessible multiplayer online video game written in GDScript
- Automate testing and validation of client and server computation
- Analyze event log trends to inform balanced game design
- Deploy and maintain a website written in Ruby, SASS, and HTML

### Employment Specialist - Stevens County DAC

Jan. 2022 - May 2022

- Delivered employment training and services to Stevens County residents with disabilities
- Implemented Minnesota state policies and educated administrators and job coaches on updates
- Planned and executed employment programs, overseeing a team of 8 job coaches

### Job Coach - Stevens County DAC

Oct. 2021 - Jan. 2022

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

## EDUCATION

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### Statistics and Data Science MicroMasters - MITx

Dec. 2023

- PyTorch | Deep Learning | Statistical Modelling | High Dimension Analysis | Simulation

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

Dec. 2021

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

## CERTIFICATIONS

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### SQL for Data Science Specialization - University of California, Davis

Feb. 2023

- SQL | PySpark | Databricks | Distributed Databases | Business Intelligence

### Azure Data Scientist Associate - Microsoft

Jan. 2023

- TensorFlow | Databricks | Data Pipelines | MLOps | Cloud Architectures | Distributed Computing

### Applied Data Science with Python Specialization - University of Michigan

Nov. 2022

- Python | NumPy | Pandas | scikit-learn | matplotlib | Seaborn | NLTK | NetworkX | Data Mining

### Data Science Professional Certificate - HarvardX

Aug. 2022

- R | Tidyverse | ggplot2 | Git | Data Wrangling | Data Visualization | Recommender Systems