

Sean Mullins

☎ (631) 944-1116 ✉ smullins998@gmail.com 🌐 smullins998.github.io

Work Experience

OpenExchange

Data Engineer Intern

Jun 2024 - Present

- Engineered a Python microservice using AWS Chalice, a serverless microservice framework, to automate operational workflows, reducing the need for manual processing and enhancing service reliability through streamlined code and efficient AWS integrations
- Led AI integration efforts, identifying operational inefficiencies and developing Python-based software to incorporate LLMs and AI tools across the organization. Prototyped and deployed four AI features in Q1 2025, streamlining workflows and enhancing automation
- Engineered an LLM-powered Python solution for structured data extraction and API integration, automating meeting and resource creation in Salesforce. Cut manual data entry by ~100 hours per week and significantly improved data accuracy

Financial Analyst

May 2021 – Sep 2022

- Designed and maintained Power BI reports integrating Salesforce, HRIS platforms, and SQL databases to analyze workforce utilization, revenue projections, profitability, and staffing efficiency, presenting insights to C-suite executives
- Analyzed 10K+ earnings call transcripts using NLP in Python, correlating stock price movements from our proprietary data with clients' earnings calls. Insights led management to explore monetizing this data as a financial product
- Developed comprehensive board materials that highlighted key revenue trends, staffing efficiency, and shifts in business volume across various global regions and sectors, providing insights to support strategic decision-making and long-term planning
- Supported finance department in monthly close processes, including COGS expense allocation and internal reporting

Data Analyst

Aug 2020 - May 2021

- Led initiatives to engineer, and maintain ETL SQL scripts and data pipelines, integrating data from six sources into a BI tool
- Managed and optimized a 65M-row SQL Server database containing extensive client data, implementing performance enhancements that significantly improved query efficiency, and expanded the system's analytical capabilities, enabling more effective reporting
- Provided ad hoc client reporting, delivering customized insights and detailed analysis to meet specific client needs and support key business objectives, ensuring client satisfaction and informed decision-making

Greystone

Oct 2022 - May 2023

Data Analyst

- Automated loan-term extraction and API data entry with a Python scraper, saving \$25,000 annually in outsourcing costs
- Developed Power BI dashboards to visualize key performance metrics, improving decision-making efficiency for the management team
- Managed \$100M portfolio of healthcare loans, overseeing performance, risk, and strategy, which resulted in maintaining a low default rate

Projects & Education

May 2023 - June 2024

Tr4der

- Designed and implemented an algorithmic trading library in Python that allows users to generate and backtest trading strategies using natural language prompts, streamlining the ideation process for stocks and ETFs
- Integrated advanced machine learning models including linear regression, SVM, and LSTMs into a 5,000-line Python codebase, resulting in 2,500+ downloads on PyPI and attracting over 40,000 views across various platforms

Mix50

- Developed an audio effects and DSP Python library enabling autonomous music mixing and DJ transitions: Implemented functionalities for analyzing audio features like BPM, key, and beatgrid, as well as customizable effects such as fades, high-pass, and low-pass filters, enhancing audio processing capabilities for users in DJ and music production contexts
- Achieved over 7,000 downloads on PyPI, demonstrating adoption within the audio engineering community

Demographic Speech Inference

- Developed a machine learning pipeline to infer age, gender, and ethnicity from speech audio using MFCCs, fundamental frequency, and speech cadence, achieving 85%+ accuracy in gender, age, and ethnicity classification with KNN and ensemble models

Education

Fordham University

Master of Science, Data Science (GPA: 3.9/4.0)

Boston College, Carroll School of Management

Bachelor of Science, Finance

Skills & Interests

- **Programming Languages:** Python, C++, SQL, Swift, Javascript, R, HTML, CSS, Bash
- **Frameworks & Tools:** PyTorch, Sci-kit Learn, Pandas, Flask, Git, AWS, Azure, GCP, HPC
- **Interests:** [Music Production](#), [Reading](#), [Tennis](#)