

Sean Mullins

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EDUCATION

- MS in Data Science, **Fordham University** (GPA: 3.9/4.0) *Aug. 2023 – Aug. 2024*
- BS in Finance, **Boston College** *Sept. 2016 – May 2020*

PROFESSIONAL EXPERIENCE

OpenExchange

Data Engineer Intern

June 2024 – Present

- Developed a Python microservice using Chalice and AWS, automating multiple operational workflows.
- Streamlined the extraction and integration of structured data by implementing function calling and LLMs with various APIs. Reduced project management data entry time by **~100hrs per week**.
- De facto “AI” expert, brainstorming integration techniques and staying current with AI landscape.

Data Analytics

Aug. 2020 – Sept. 2022

- Engineered and maintained ETL SQL scripts and data pipelines loading data across six sources.
- Boosted Salesforce analytics by integrating BI tools, reducing report generation time by 50%.
- Managed a **65M-row** SQL Server database, tuning performance to enhance query efficiency.

IBM & Fordham Fellowship

May 2024 – Present

Research Intern

- Implemented Retrieval-Augmented Generation (RAG) using AWS Sagemaker to analyze and understand knowledge decay within a company, driven by employee movements and organizational changes.
- Developed Python algorithms for data matching, incorporating LLM and web scraping techniques.
- Implemented a 1TB database in AWS to store and manage research data effectively.

Greystone

Oct. 2022 – May 2023

Data Analytics

- Realized annual cost **savings of ~\$25,000** by developing a Python-based loan document scraper, automating loan-term extraction and data entry into a database via API.
- Designed and implemented PowerBI dashboards to visualize and track key performance metrics.
- Asset-Managed a **\$100M portfolio** of healthcare loans, overseeing performance, risk, and strategy.

PROJECTS & RESEARCH

SongSpy - [Website](#)

- Developed a Machine Learning-powered web application to identify artificially generated music, training a classifier on 1,000+ audio files sourced from YouTube. Achieved **85% prediction accuracy**.
- Developed using Flask and deployed to PythonAnywhere. **1000 site hits** on the first day with 100 article views.

Reverse Momentum - [Website](#)

- Developed and implemented a quantitative trading strategy, conducting statistical tests to assess market efficiency and analyze the impact of major events on equity prices. Achieved **1.87 Sharpe Ratio**.
- Leveraged Python APIs for automated trade execution, optimizing the strategy's implementation.

Goons - [Website](#)

- Personal music project with **7 million streams** across platforms. Led all aspects of project over the past 13 years, including sound design, recording, engineering, production, songwriting, marketing, and artwork creation.

LEADERSHIP EXPERIENCE

D1 Men's Varsity Tennis Team, Boston College

Sept. 2016 – May 2020

- Selected as captain of the Boston College Tennis Team as a Junior and Senior for the 2018-2020 seasons.
- Earned Atlantic Coast Conference Academic Honor Roll for both the 2019 and 2020 seasons.

TECHNOLOGIES

Programming Languages: Python, Javascript, C++, R, SQL, HTML

Frameworks: PyTorch, SKLearn, Pandas, Flask, Git, AWS, Azure, Matplotlib, PowerBI