

Sean Mullins

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Education

Fordham University

Aug 2023 - Aug 2024

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

Boston College, Carroll School of Management

Sep 2016 - May 2020

Bachelor of Science, Finance

Work Experience

OpenExchange

Data Engineer Intern

Jun 2024 - Present

- Developed a Python microservice using Chalice and AWS, automating booking creation workflows
- Streamlined the extraction and integration of structured data by implementing function calling and leveraging LLMs with multiple APIs, optimizing workflows and reducing project management data entry time by approximately 100 hours per week
- Served as the AI expert, brainstorming integration techniques and monitoring trends to develop AI implementation solutions

Data Analyst

Aug 2020 - Sep 2022

- Led initiatives to engineer and maintain ETL SQL scripts and data pipelines loading data across six sources
- Designed and maintained Power BI reports analyzing workforce utilization, revenue projection, profitability, staffing efficiency, and business retention, consolidating Salesforce, HRIS platform, SQL databases
- Supported finance department in monthly close processes, including CoGS expense allocation and internal reporting
- Managed a 65M-row SQL Server database, enhancing performance to improve query efficiency and capabilities

Greystone

Oct 2022 - May 2023

Data Analyst

- Developed a Python-based loan document scraper which automated loan-term extraction and data entry into an API database, achieving annual cost savings of \$25,000 for the project (20%)
- Developed PowerBI 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

IBM & Fordham Fellowship

May 2024 - Oct 2024

Research Intern

- Conducted research under Dr. Navid Asgari in the summer of 2024 and implemented RAG in AWS Sagemaker to analyze knowledge decay within a company, resulting in insights into the impact of employee movements and organizational changes
- Enhanced data accuracy by 30% by developing Python algorithms for data matching using LLM and web scraping techniques
- Created a sophisticated 1TB database in AWS to store and manage research data effectively

Projects

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 170+ downloads in the first month and attracting over 20,000 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 3,000 downloads on PyPI, demonstrating strong adoption within the audio engineering community

Goons

- Professional 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
- Remains an active enterprise with supplemental income and creative expression

Skills

- **Programming Languages:** Python, Swift, Javascript, C++, R, SQL, HTML, Bash
- **Frameworks & Tools:** PyTorch, SKLearn, Pandas, Flask, Git, AWS, Azure, GCP, HPC