

# Jack Thomas Doherty

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## EDUCATION

### Loyola University Maryland

Bachelor of Information Systems & Data Analytics

August 2020 - May 2024

Baltimore, MD

### Newcastle University

Combined Honours

January 2023 - May 2023

Newcastle, UK

## EXPERIENCE

### Business Analyst Intern

Boar's Head Provisions

June 2023 - August 2023

Queens, NY

- Developed Python scripts to extract and process 100+ data codes from a data lake, integrating them into a streamlined pipeline for enhanced analysis and workflow efficiency.
- Built a custom Python pipeline on Azure to automate documentation, converting PDF and Word files to Markdown, cutting wiki writing time by 95%.
- Analyzed business trends using SQL and Excel to deliver actionable insights that informed strategic decisions. Centralized a codebase for 10+ partners on Azure, improving collaboration and efficiency.
- Led a marketing campaign for a new product line, achieving a 20% sales increase, while creating training materials that enhanced client product knowledge and engagement.
- Designed a custom repository to transition code to the cloud using Azure, increasing accessibility for all employees and saving the company over 50 hours per week.

## PROJECTS

### Algorithmic Trading Model | Source Code

Python | Pandas | Scikit-Learn

- Developed a Random Forest-based machine learning model in Python and scikit-learn to predict stock price movements, achieving 60% accuracy.
- Built an automated backtesting framework to validate trading strategies over 20+ years of historical market data.
- Engineered 10+ technical indicators, including moving averages and momentum metrics with pandas, resulting in a 15% improvement in model accuracy through effective feature engineering.

### SportLogic Pro | Website | Source Code

Python | GitHub CI/CD | RESTful API

- Developed and deployed a full-stack web application that delivers accessible, data-backed sports analytics insights and strategic tools for 100+ users.
- Utilized Python for the API backend, JSON files for data storage, and HTML, CSS, and JavaScript for the user interface, while implementing GitHub Actions for continuous integration and deployment.
- Engineered automated data processing pipelines to analyze arbitrage opportunities, processing over 10,000+ daily odds entries through custom Python scripts, and presenting actionable insights through interactive web visualizations.

### E-commerce Reselling

Selenium | PostgreSQL | Docker

- Developed an automated inventory management system using Python and Selenium to monitor 1,000+ products across multiple e-commerce platforms, achieving an 80% success rate in securing high-demand items.
- Implemented a real-time price analytics pipeline in PostgreSQL to track competitor pricing and market trends, enabling data-driven purchase decisions that boosted profit margins by 15%.
- Engineered a Dockerized microservice architecture to support concurrent monitoring of multiple websites.

### Olympic Medals Predictor | Source Code

Python | Pandas | Scikit-Learn

- Developed a predictive model to forecast outcomes by integrating data scraping with Pandas and machine learning algorithms using Scikit-Learn.
- Visualized key data insights using Seaborn and Matplotlib, identifying significant trends between variables such as athlete count and medals won, which informed model adjustments and improved performance.
- Implemented a robust data pipeline to automate data collection, cleaning, and preprocessing, ensuring the model's adaptability to new data and evolving trends in Olympic performance.

## LEADERSHIP

### Captain | Loyola Club Basketball

September 2022 - May 2024

- Led a diverse team of 20 student-athletes, implementing weekly practice sessions and skill development programs, resulting in three consecutive winning seasons.
- Organized and executed monthly competitive basketball events against university clubs, successfully raising over \$1,000 for charity through fundraising efforts.

## SKILLS

**Languages:** Python, Java, JavaScript, SQL, C, HTML5, CSS

**Developer Tools:** Git, AWS, Azure, Power BI, SAP ERP, Figma, Docker, Postman, Jira, Selenium

**Libraries/Frameworks:** ReactJS, NodeJS, NextJS, Spring Boot, VueJS, Flask, PostgreSQL