

# Jack Thomas Doherty

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## EDUCATION

### Loyola University Maryland

Bachelor of Information Systems & Data Analytics

August 2020 - May 2024

Baltimore, MD

- Relevant Coursework: Data Structures, Algorithms, Database Systems, Data Science, Statistics, Computer Networks, Data Mining, Cyber Security

### Newcastle University

Combined Honours

January 2023 - May 2023

Newcastle, UK

## EXPERIENCE

### Software Engineer

May 2024 - Present

#### Redshirt Fantasy

Queens, NY

- Architected and developed comprehensive fantasy sports platform through full-stack implementation using React, Express.js, and MySQL, incorporating real-time sports data integration via SportaData.io API.
- Engineered secure user authentication system and scalable database architecture supporting complex fantasy sports operations including multi-player drafts, dynamic scoring, and automated player trading functionality.
- Spearheaded end-to-end development of customizable league management system featuring commissioner controls, automated draft scheduling, and configurable league parameters, driving platform engagement through intuitive UI/UX design.

### Business Analyst Intern

June 2023 - August 2023

#### Boar's Head Provisions

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.
- 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

Pandas | NumPy | 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.

### SportsLogicZone | Website

React | Express | MongoDB

- Developed and deployed a full-stack web application that delivers accessible, data-backed sports analytics insights and strategic tools for 100+ users.
- Implemented comprehensive automated data processing pipelines utilizing Node.js and Express.js to analyze arbitrage opportunities, processing over 10,000+ daily odds entries through efficient backend algorithms and presenting actionable insights through interactive React-based visualizations.
- Leveraged MongoDB for robust data storage and management, while integrating continuous integration and deployment workflows with GitHub Actions to ensure seamless and reliable application updates.

### E-commerce Reselling

Pandas | Selenium | PostgreSQL

- 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%.
- Utilized Pandas for data manipulation and analysis of e-commerce product data, streamlining insights from inventory and pricing trends to support strategic decisions.

## 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:** JavaScript, Python, TypeScript, Java, C++, SQL, HTML, CSS, C

**Developer Tools:** Git, GitHub, AWS, Docker, PostgreSQL, MongoDB, Azure, CI/CD, Postman, Selenium, Figma, Vercel, Supabase, Prisma

**Libraries/Frameworks:** React, Next.js, Node.js, Express.js, Flask, Tailwind CSS, Prisma