

# Sean Aidan O'Toole

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## EDUCATION

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### University of Texas at San Antonio

*Bachelor of Science in Computer Science, Minor in Mathematics*

*Concentration in Data Science and Software Engineering*

San Antonio, TX

Aug. 2022 – May 2026

GPA: 3.90

## SKILLS

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**Languages:** Java, Python, C, SQL, JavaScript, PHP, HTML/CSS, R, BASIC, BASH, Kotlin

**Developer Tools:** Cloud Technologies (AWS), Git, Android Studio — **Libraries:** TensorFlow, SKlearn, Matplotlib

**Other:** German (Intermediate), Spanish (Elementary), Adobe Photoshop and Premier Pro (2000+ hours)

## EXPERIENCE

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### Database Developer

*The Experts Tribe*

May 2025 – August 2025

*San Antonio, TX*

- Designed and maintained relational and cloud-hosted databases (PostgreSQL, MySQL, Firebase Firestore).
- Implemented efficient schema structures and data models to ensure seamless integration with frontend components and scalability for future feature expansion.
- Optimized queries and data retrieval processes, reducing potential latency and improving overall user experience.

### Artificial Intelligence Research Assistant

*University of Texas at San Antonio*

Oct 2024 – May 2025

*San Antonio, TX*

- Utilized Llama to create automated feedback loops for software development tasks, enhancing workflow efficiency.
- Analyzed and categorized GitHub change requests, identifying patterns that led to a 60% increase in model accuracy for understanding and improving developer feedback.
- Developed scripts to extract user comments and change requests from GitHub repositories via BeautifulSoup

### College of Science Mentor

*University of Texas at San Antonio College of Sciences Student Success Center*

Aug 2023 – June 2025

*San Antonio, TX*

- Led the Four-Year Plan Committee, coordinating initiatives to improve career readiness for 2,000+ students by managing project timelines, budgets, and resource allocation.
- Collaborated with other departments to plan and host events promoting academic growth and career awareness.
- Led an effort with COS leadership to analyze data trends and translate findings into actionable strategies for improving student engagement, retention, and graduation rates.

## PROJECTS

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### Fantasy Football Assistant | *Python, sci-kit learn*

- Developed a data driven fantasy football program to identify undervalued players and assist with draft logic.
- Designed algorithms for draft strategy and team composition, used statistical backtesting to validate performance.
- Utilized Principle Component Analysis and Linear Discriminant Analysis for dimensionality reduction, model optimization, and player classification.

### High-Volume Data Ingestion & Modeling Pipeline | *AWS, PHP, MySQL*

- Designed and implemented a scalable ETL pipeline to process and validate 5M+ records using parallel file chunking and multi-process execution.
- Developed a normalized relational schema by decomposing device and manufacturer attributes into indexed lookup tables, reducing storage overhead by 90% and improving upload speed by 400%.
- Implemented batch-based insertion with SQL constraint handling, enabling efficient duplicate detection and automatic routing of invalid records to a structured error table.

## AWARDS AND HONORS

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**Positions:** ACM Media Officer (2023-2025), RowdyHacks Officer (2023-2025), GWG Scholar (2022-2025)

**Certifications:** IBM AI Foundations For Business, University of Michigan Generative AI Essentials, Google Data Analytics Professional, Ceriport HTML/CSS, Microsoft Fundamentals, Computational Thinking, 652 Cyber Security

**Honors:** President's Scholarship(5x), Dr. Craig Endowed Scholarship In The Sciences, Scholarship For Computer Scientists Who Don't Run Good, President's List(4x), Dean's List(1x), Honors College Student, Most Outstanding Information Technology Student, Most Outstanding Business and Administration Student, Distinguished Student Athlete