

# Austin Aguilar

Knoxville, TN | 901-619-4794 | austin47a@gmail.com

## EDUCATION

### Bachelor of Science in Mechanical Engineering Minor in Computer Science

Memphis, TN

*The University of Memphis*

2019 - 2023

- Organizations: Helen Hardin Honors Program, American Institute of Aeronautics and Astronautics (AIAA)
- Awards: Graduated Magna Cum Laude with University Honors, Dean's Scholarship (2019-2023), Dean's List

### Master's of Science in Computer Science

Atlanta, GA

*Georgia Tech University*

2024 - 2026

- Part-time online program
- Offer accepted; start date: August 2024; expected graduation: December 2026.

## EXPERIENCE

### Software Development Intern

Oakridge, TN

*Oak Ridge National Laboratory*

May 2023 – July 2023; January 2024 - Present

- Developed a collaborative filtering recommendation system leveraging HuggingFace and a Nearest Neighbors to enhance user experience.
- Engineered a robust Python and PostgreSQL data pipeline using FastAPI to expedite recommendation feature deployment.
- **Developed** a real-time instrument anomaly detection dashboard utilizing PyTorch deep learning models.

### Software Development Intern

Calgary, AB (Remote)

*ITP Metrics*

August 2023 – January 2024

- Assisting in developing a full-stack psychology survey web application using the MERN stack.
- Utilizing agile development tools such as Jira to delegate tasks and efficiently develop the project
- Gaining experience with software engineering best practices to produce manageable and reusable code.

### Undergraduate Research Assistant

Memphis, TN

*The University of Memphis*

September 2022 – December 2023

- Wrote and presented a paper at the 2023 AIAA student conference discussing the applications of K-means clustering in atmospheric data sets.
- Assisting in the development of HPC scripts for turbulence model simulations.
- Researching additional Python machine learning methods to apply to atmospheric datasets and additional turbulence data.

### Packaging Engineer Intern

Arlington, TN

*Microport Orthopedics*

October 2021 – August 2022

- Spearheaded experimental procedures of packaging projects by preparing and analyzing over 3000 test samples to determine material strength and sterile efficiency.
- Analyzed and created data visualizations with statistical software such as Microsoft Excel and Minitab.
- Worked closely with the Packaging Department and Engineering management to develop test methods and projects to ensure compliance with ASTM and ISTA standards.
- Collaborated with purchasing to analyze and develop potential material and cost-saving packaging configurations.

## RELEVANT COURSES

OOP and Data Structures, Database Process and Design, Discrete Math, Design/Analysis Algorithms, Numerical and Statistical Methods

## SKILLS

**Skills:** Python | PostGresSQL | MongoDB | Express | React | Node | JavaScript | Git | HTML | CSS | VueJs | Jira