

Joshua Daugherty

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Education

3.83/4.0 **Accelerated MS Thesis in CS**, University of Alabama at Birmingham | Birmingham, AL

Jan 2023 - Aug 2025

3.79/4.0 **BS in Computer Science**, University of Alabama at Birmingham | Birmingham, AL

Aug 2020 - Apr 2024

Relevant Courses: Artificial Intelligence, Advanced Algorithms & Applications, Automata Theory & Formal Languages, Computer Vision & CNNs, Database Systems, Deep Learning, Linear Algebra, Machine Learning, Programming Languages, Software Engineering

Experience

Lead Python Developer, Celestia Diagnostics | Birmingham, AL

Mar 2024 - Present

- Design and implement a full-scale acquisition and analysis pipeline currently in production.
- Develop GUI applications using a proprietary toolkit tailored for our internal lab.
- Maintain and expand repositories totaling approximately 12,000 lines of code across various company projects.
- Build an integrated data system to support collaboration between internal teams and external clinical and research partners.
- Develop and train machine learning models for in-house use, optimizing performance and accuracy for internal applications.
- Ensure rigorous protection of patient and subject data in compliance with HIPAA regulations, employing advanced encryption protocols for data storage and transmission.

Graduate Teaching Assistant - Probability & Statistics, University of Alabama at Birmingham

Aug 2023 - May 2024

- Teach probability theory and Python programming (Numpy, Matplotlib, and other libraries)
- Assist 200+ graduate and undergraduate students by hosting lectures, office hours, and study sessions
- Proctor exams, collaborate with the professor on course materials, and mentor students
- Prepare lecture material, grade assignments, and provide valuable feedback for students

Catalog Specialist, Saucey Inc. | Remote

Aug 2021 - Nov 2022

- Evaluate 100's of stores' onboarding inventory and provide insightful feedback
- Modify SQL and Bash scripts according to parameters on a store-to-store basis
- Quality control of 100's of store menus and website products

Skills

Programming Python, Java, LaTeX, SQL/PostgreSQL, APIs, Powershell, Relational Databases

Mathematics Linear Algebra, Differential Equations, Advanced Calculus, Probability Theory, Discrete Maths, Numerical Analysis

Software AWS (Lambda, S3, EC2, Snowflake), Linux, VS Code, IntelliJ, Docker, Git, Google Workspace, MS Office, Adobe Suite

Personal Projects

CGI Application Tracker - 2nd Place Finish

UA Innovate Hackathon

- React web-app designed to improve and assist CGI's hiring efforts by streamlining recruitment process
- Implemented a combined authentication portal for both students and CGI staff
- Added OpenAI API calls to generate feedback for the resume provided by the student, to help HR staff with the hiring process

AI Maze Solving Bot

CS 660 - Artificial Intelligence (Course Project)

- Implemented and fine-tuned algorithms, such as A* search, to optimize the bot's pathfinding abilities
- Led effectively in a team environment, collaborating with other students from diverse backgrounds to achieve project goals
- Identified challenges and devised creative solutions to optimize the bot's performance, making it adaptable to various mazes

Godot RPG Game

Godot Game Engine / GDScript (Personal Project)

- Created a 2D role-playing game where a player can explore areas and defeat monsters
- Programmed the logic and physics engine for the combat and movement systems
- Utilized the integrated Godot blender to create sprite animations

Extracurricular

Association for Computing Machinery (ACM at UAB), Member

Aug 2022 - Present

<https://uabacm.org>

- Attend club events and participate in workshops on a weekly or bi-weekly basis

Club Director, Blazers uLoL at UAB

Fall 2021 - Spring 2023

- Manage a club of over 100 students while displaying leadership skills and capabilities
- Assist other club executives in planning and managing club events
- Attend budget meetings and club proposal meetings with the club president