# Malachi Crain

malachicrain@gmail.com • (910) 758-3704 • linkedin.com/in/malachi-crain • malachicrain.com

## TECHNICAL SKILLS

**Programming Languages:** JavaScript, Python, C (proficient); C++, Java, HTML, CSS, SQL (Intermediate); Rust (beginner)
**Frameworks & Tools:** React, Redux, SpringBoot, Expo, PyTorch, Node, Express, MongoDB, Google Analytics
**Software Applications:** Linux, Git, GitHub, Jenkins, Octopus, Azure DevOps, Excel, Microsoft Power Suite, Rally

## PROFESSIONAL WORK EXPERIENCE

**Research Assistant | Intelligent Systems and Structural Dynamics Laboratory | Tuscaloosa, AL** **Aug 2024 – Present**

- Built a web scraper to collect and label a dataset of flooding images for training Machine Learning models
- Designed and trained Machine Learning models to measure flood depth in real-time using Python and PyTorch

**Software Engineering Intern | Unum Group | Columbia, SC** **May – Aug 2024**

- Contributed to an Agile team of 12 tasked with improving an external-facing web portal with 5000+ daily users
- Implemented new features using ReactJS and CSS, adding the ability to view uploaded documents and file insurance claims
- Fixed accessibility issues, software bugs, and styling inconsistencies, helping improve CSAT scores by 3%
- Refactored unit tests, increased test coverage, and removed deprecations, reducing technical debt and improving code quality

**IT Intern | Depository Trust and Clearing Corporation | Tampa, FL** **June – Aug 2023**

- Developed AutoSys batch process with Java and SQL to ensure reports are generated daily, increasing customer satisfaction
- Migrated multiple Java applications to a password access manager, enhancing security and guaranteeing compliance
- Tested and deployed code changes to verify code quality with JUnit, Mockito, and Jenkins
- Automated business processes using Microsoft Power Apps and Power Automate, saving an estimated 200 hours

## EDUCATION

**The University of Alabama | Tuscaloosa, AL**

**B.S. in Computer Science and Mathematics | GPA:** 4.0/4.0 **May 2025**

**Relevant Coursework:** Software Design, Data Structures & Algorithms, Operating Systems, Database Management, Programming Languages, High Performance Computing, Scientific Computing, Microcomputers, Linear Algebra, Discrete Mathematics, Differential Equations, Probability, Statistics I & II

**Activities/Organizations:** BamaCatholic, Fellowship of Catholic University Students, Ultimate Frisbee Club Team, Intelligent Systems and Structural Dynamics Lab, Hackathons, Cyber Security Lab

## LEADERSHIP & PROJECTS

**Vice President | BamaCatholic** **Dec 2023 – Present**

- Coordinated 20 volunteers each week to help run a religious service attended by at least 400 students weekly
- Recruited and trained 30+ new volunteers for 8 different positions, increasing volunteer numbers by over 50%
- Developed leadership skills by supervising and mentoring 5 subordinates who manage their own teams and events

**Technical Lead | University of Alabama Natural Language Processing Research** **Feb 2022 – Present**

- Developed a program to analyze texts & test hypotheses about natural language processing using Word2Vec, BERT, & Alpa
- Used the university's High Performance Computing cluster to run the program at scale, collecting results on 27 large texts
- Sorted and compiled data, in order to co-write conference presentation: "Word Prediction Algorithms and the Analysis of Literary Texts," 35th Annual Science Literature and the Arts Conference, Purdue University, October 8, 2022

## EXTRACURRICULAR ACTIVITIES & AWARDS

**University of Alabama Outstanding Junior in Computer Science** **Aug 2023 – May 2024**
**College of Arts and Sciences Outstanding Sophomore** **Aug 2022 – May 2023**
**Hackathons** **Apr 2022 – Present**

- 2024 UA Innovate Hackathon: 1st place in Full Stack Development category (lead frontend developer)
- 2024 Big Ideas Social Innovation Contest: Grand Prize Winner (team lead)

**University of Alabama President's List** **Dec 2021 – Present**
**National Merit Finalist** **Jan 2021**