

Alexander Riddle

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EDUCATION

Georgia Institute of Technology

University of Georgia

Cumulative GPA: 3.58

Fall 2023 – Spring 2027

Fall 2022 – Spring 2023

Degree: Bachelor of Science in Computer Science (Devices and Intelligence); Minor in Robotics (ECE)

SKILLS

Programming: C, C++, C#, Python, Java, SQL Server, JavaScript, GitHub (Proficient); MATLAB (Familiar)

CAD: SolidWorks, Onshape, Fusion 360, KiCAD

OS: Windows, Unix/Linux

Hardware: Robotics, Arduino, Soldering, Waterjet, Mill, Lathe

WORK EXPERIENCE

RoboWrestling Project Manager, RoboJackets, GT, Atlanta GA

April 2025 - Present

- Lead 60+ students in designing, fabricating, and programming of 4 3kg and 18 500g sumo robots, quadrupling the team's competition roster from 1 to 4 3kg and 7 to 13 500g robots in one year.
- Led a 15-robot team to Maker Faire Orlando, sweeping 1st, 2nd, and 3rd place in the 500g division.
- Built a mechanical, electrical, and firmware training curriculum for 40+ new engineers, driving 80% retention.
- Manage a \$50K annual budget, doubling the parts budget from \$10K to \$20K through internal advocacy.

Mechatronics Engineering Intern, Kovari, San Francisco California

June 2026 - August 2026

- Designed a wearable off-robot data-collection rig that doubled throughput vs. on-robot methods, built for single-operator use and scaling from 4 in-house units toward a planned fleet of 20-100.
- Cut robot build time 70% (1 week to 2 days) by designing the team's first standardized assembly process.
- Authored the robot's first wiring diagram, which became the standard onboarding reference for new engineers.

Full Stack Software Engineering Intern, UPS Supply Chain, Alpharetta GA

Summer 2024 & Summer 2025

- Performed full systems life cycle management and development for brokerage at UPS.
- Developed web applications with Angular and optimized backend infrastructure to reduce memory usage by 80%.
- Reinstated and significantly reduced processing time for useful Windows forms applications in C# that are used daily by 50+ developers to modify and duplicate shipment data objects.

PROJECTS

Robot Lead (Ferrarii), RoboJackets, GT, Atlanta GA

April 2024 - Present

- Designed and built Ferrarii, a 3kg autonomous sumo robot, using Onshape, KiCad, and embedded C++ firmware.
- Placed 4th in Mega Sumo at Brazil's RSM International Challenge, RoboJackets' first-ever international 3kg sumo win, leading a 7-member team that fielded 18 of 108 total competitors across both divisions.
- Placed 1st among U.S. teams at RoboGames 2024, competing at Japan's AJRST Grand Finals in 2024 and 2025.

Guitar Pedal (Solo Build), GT, Atlanta GA

August 2025 - December 2025

- Built a real-time guitar effects pedal on a Teensy microcontroller, reshaping audio into 4 waveforms.
- Derived and implemented a custom inverse-sine waveshaping algorithm for real-time triangle wave synthesis.
- Designed the full circuit and firmware in C++, integrating rotary encoders, an I2C display, and a footswitch.

OTHER EXPERIENCE

RoboJackets Firmware Trainer & RoboWrestling Software Lead, GT, Atlanta GA

May 2024 - May 2025

- Led training sessions for firmware across RoboJackets, teaching GitHub and C++ / Arduino development.
- Directed 20+ engineers in the software development of new autonomous 500g sumo robots by designing and implementing a robust software architecture for our sumo bots.

UPS Hacks 2024 & 2025 (Hackathon Event), UPS Supply Chain, Alpharetta GA

July 2024 & July 2025

- Built a full-stack computer vision solution using Azure to auto-identify truck IDs from security footage.
- Added voice shipment creation feature to UPS app using Azure intelligent speech recognition model.
- Placed top 3 out of over 60 teams in 2025.

Prototyping Intelligent Devices Teaching Assistant, GT, Atlanta GA

January 2026 - Present

- Support 100+ students in the design and development of embedded systems based long term projects.