Sean Ernstes

Computer Engineering Student & Open-Source Maintainer

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Professional Summary

Computer Engineering student with hands-on robotics software experience, including a cross-platform Visual SLAM pipeline (Unity/C#, Java) adopted by teams worldwide with 150+ GitHub stars and 400+ commits. Skilled in Java, C#, computer vision, sensor fusion, and Kalman filtering. Led a 7-person software team to 12+ awards and a 4-person IT crew that deployed 2,200+ devices 12x faster via automation. 4.0 GPA. Seeking software engineering, SoC, chip, or PCB design co-ops or internships starting fall 2027.

Education

Georgia Institute of Technology, BS in Computer Engineering — June 2026 – Expected 2030

- GPA: 4.0
- Relevant Coursework: Digital Systems Design, Object Oriented Programming

Skills

Technical Skills: Java, C#, Git, Object-Oriented Programming (OOP), Computer Vision, Visual SLAM, Sensor Fusion, Kalman Filtering, Robotics, Autonomous Systems, Unity, Protocol Buffers, CI/CD, Database Administration

Professional Skills: Team Leadership, Software Project Management, Problem Solving, Delegation, Conflict Resolution, Time Management, Communication, Coaching/Onboarding, Project Coordination

Leadership

Leadership: Student Council Representative (4 years), Class Officer (4 years), FIRST Robotics Programming Team Captain (3 years), Chick-fil-A Shift Leader (2 years), QuestNav Project Core Maintainer

Experience

Lead Maintainer, QuestNav – Remote — Feb 2025 – present

- Architected cross-platform VSLAM pipeline (Unity/C#, Java, Vue) for robotics localization on Meta Quest 3
- Grew project to 140+ stars, 80+ forks, 400+ commits across 20+ releases; adopted as vendor dependency by FRC teams worldwide
- Built multi-language CI/CD pipeline (GitHub Actions) with automated builds, doc generation, and multi-target releases

Manager In Training (Shift Leader), Chick-fil-A – Kalamazoo, MI — July 2023 – present

- Coordinated team positioning and workflow for a crew of 15 employees during peak hours serving 500+ guests/day, maintaining speed-of-service under 5 minutes
- Trained and onboarded 2 new employees on food safety and brand standards, achieving 100% health inspection compliance
- Resolved operational disruptions per shift (equipment, staffing, order errors) to sustain guest satisfaction scores above 88%

Software Team Lead, FRC 5152 – Otsego, MI — Oct 2022 – May 2026

- Self-taught Java/WPILib to lead software development across 4 seasons, advancing to Software Lead
- Managed and trained a team of 7, building a sustainable technical talent pipeline
- Programmed autonomous/vision systems earning 12+ awards; helped team qualify for FIRST World Championship twice

IT Intern, Otsego Public Schools – Otsego, MI — June 2022 – Aug 2022

- Deployed 2,200+ Chromebooks across 5 schools in 8 weeks as part of a 4-person IT team
- Automated enterprise enrollment with an Arduino keystroke-emulation tool, accelerating throughput 12x
- Asset-tagged and logged all devices into a centralized inventory database

Activities

Activities: FIRST Robotics, Boy Scouts (Eagle Scout 2025), Tennis, National Honors Society, Student Council, ChiPhi Fraternity Member, Georgia Tech Propulsive Landers Avionics Team