Akhil Bejjanki

Pleasanton, California| 510-807-1095 | akhilbejjanki30@gmail.com | U.S. Citizen

Education

Georgia Institute of Technology | Atlanta, GA   Graduation: Dec 2027
Bachelor of Science in Computer Engineering, GPA 4.0/4.0

Skills

Embedded & Firmware: C++, Rust, RTIC (RTOS), Microcontrollers, ADC, PWM, I²C, SPI, GPIO
Hardware & Systems: RaspberryPi, Arduino, Sensors, Oscilloscopes, PCB Design
Software & Tools: Python, React, Java, MongoDB, Typescript, Node.js, Spring

Experience

RoboCup | Atlanta, Georgia   *August 2025 – Present*
Firmware Engineer
- Developed real-time embedded firmware in Rust for autonomous robotic systems, integrating motor control, sensors, and I²C-based hardware communication
- Implemented an RTIC-based real-time cooling system, reading thermistor data via ADC, driving PWM-controlled MOSFET fans, and enforcing fail-safe thermal protection
- Collaborated with electrical subteam to integrate firmware for autonomous decision-making, coordination, and strategy

Mechatronics & Motivation @ Flavin Neuromachines Lab | Atlanta, Georgia   *December 2025 – Present*
Undergraduate Researcher
- Developed haptic feedback device to enhance learning for K–12 students and designed flexible PCB for wearable device.
- Wrote embedded firmware for sensor systems, integrating EMG sensors to measure muscle activity
- Utilized Apple ARKit to estimate user focus levels and trigger real-time haptic feedback through vibrations

lkey studios | Berlin, Germany   *August 2023 – July 2024*
Software Intern
- Developed and launched a fully functional website that sustained 50+ monthly users, writing code to enhance navigation and improve the user interface
- Built and integrated multilingual support, improving accessibility for diverse audiences
- Enhanced features for an online shop using React, contributing to frontend development and responsive design

Projects

Smart Path AI | Big Data Big Impact @ Georgia Tech   *August 2025 – Present*
AI Lead
- Developed GraphRAG-powered AI tools that dynamically adjust question difficulty and concept sequencing to optimize learning
- Implemented MongoDB into a full-stack adaptive learning platform to store and retrieve user data, enabling personalized quizzes based on performance and confidence scores reducing processing time by 50%.
- Built a React user interface supporting interactive learning modules, improving data flow between frontend and backend

RaspberryPi Robot   *January 2024 – July 2024*
Designer
- Independently designed and built a Raspberry Pi–powered robot from scratch, integrating sensors, motors, and custom code to detect and respond to nearby objects.
- Conducted hardware research, assembled and programmed all system components, and tested embedded control logic.

Material Sorter   *April 2024 – May 2024*
Engineer and Programmer
- Designed and programmed an automated device that sorted 15 recycled-material marbles into three bins with 100% accuracy
- Modeled and 3D-printed custom input mechanism using AutoCAD, streamlining sorting and ensuring single-marble precision
- Delivered a professional presentation and live demonstration of device to CEOs, showcasing design and real-world functionality

Leadership

AVHS Engineers | Programming Captain   *August 2022 – May 2025*
- Led team to states by designing, building, and programming three unique competition robots featuring pneumatics, catapults, and custom drivetrains
- Guided programming in C++ for autonomous and driver-control systems while mentoring new members in coding through developing hands-on tutorials for robotics fundamentals.