

SEAN M. DUFFIE

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OBJECTIVE

Seeking a Full-Time position in Embedded Software Engineering or similar. I currently hold a Secret-level Security Clearance.

EXPERIENCE

Leidos, Huntsville, Alabama February 2026 – Present

C++ Software Engineer

- Hold a Secret-level Security Clearance while developing C++ software for various embedded military equipment.

Georgia Tech Research Institute, Smyrna, Georgia January 2024 – November 2025

Software Research Engineer I

- Hold a Secret-level Security Clearance while analyzing embedded equipment, radios, and optics systems.
- Designed software/plugins to interpret hardware protocols and RF comms using tools like Wireshark or Saleae Logic.
- Debugged and extracted firmware using JTAG connections for analysis in Ghidra and IDA Pro.
- Used Logic Analyzers and Oscilloscopes to debug digital and analog signals including I2C, SPI, CAN, MIL-1553, etc.
- Debugged and Analyzed optics systems of various military equipment.

Lynntech inc., College Station, Texas September 2021 – January 2024

Embedded Software Engineer

- Lead a team of ~8 people to construct a database and media tagging system for our training data.
- Worked with OpenCV to identify/recognize various objects – including faces, projectiles, and blood cells.
- Designed a sensor network for a manned vehicle, using many IMU sensors to communicate with a central unit over SPI.
- Designed, fabricated, and assembled PCBs using Altium Designer.
- Worked with Android Studio to make an app on an RFID Reader.

Embedded Engineering Technician

- Designed and assembled custom PCB boards for company projects using Altium Designer.
- Worked with OpenCV and Pygame to develop an image processing software with a fast, multithreaded GUI.
- Worked with CUDA on a multi-GPU system to convert a MatLab script to C++ and increase speeds by ~1200%.

12th Man Technologies, College Station, Texas May 2021 – September 2021

Student Ambassador

- Diagnosed and documented issues with laptops that were checked in to us for repair or maintenance.

EDUCATION

Georgia Institute of Technology, Atlanta, Georgia August 2025 – Present

Degree: Master of Computer Science (In Progress)

Texas A&M University, College Station, Texas August 2018 – May 2023

Degree: Bachelor of Science in Electronic Systems Engineering Minors – Computer Science, Cyber Security

Certifications

- Azure Fundamentals (AZ-900) June 2026

SKILLS

Software Experience:

- Most personal projects have been done in Python; most work projects have been done in C/C++ or Assembly.
- Extensive experience with OpenCV and Image Processing.
- Fast and Efficient software, Magma multi-GPU processing, multiprocessing/threading.
- Designed various UI using Qt, Pygame, uGFX, or JavaScript.

Hardware Experience:

- PCB design on Altium and EasyEDA. Soldering and assembling boards in-house.
- JTAG debugging, extracting firmware. Disassembling binaries in Ghidra.
- Debugging hardware connections with an Oscilloscope, Saleae, or Wireshark.
- Calculating and optimizing Quiescent Current in battery powered devices.

ACTIVITIES

Personal Projects

- Capstone Role: Software Lead, designed a portable and budget-friendly embedded device to monitor local storm data.
- Designed custom PCB and webserver for an ESP32 Wi-Fi chip to integrate non-smart devices with IoT capabilities.
- Automated Gardening: using microcontrollers that monitor and modulate temperature, humidity, water level, and light.
- Wearable LED matrix using ESP32 to display images and GIFs over Bluetooth on my graduation cap.
- See more detailed examples and descriptions on my Portfolio page: (<https://seanduffie.vercel.app>)