

Tanner Muldoon

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U.S. Citizen

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I'm a recent graduate from Georgia Tech currently working at L3Harris Technologies in Sunrise, FL. I've had experience in a lot of software engineering areas over most of my life, but in recent years I've focused mainly on embedded software development. At my current workplace, I work in embedded digital signal processing for software defined radios. Seeking embedded developer positions with special interest in physical layer networking.

Concentrations:

- Embedded software
- Realtime systems
- Digital signal Processing (DSP)
- Software-defined radios (SDR)
- Physical layer networking

Languages:

C, C++, Java, Python,
MATLAB/Octave,
Bash Scripting

Source Control:

Git or SVN

Familiar

Environments:

Linux, Arduino,
Raspberry Pi, ARM
MBED, Pycom,
QNX, TI C5xxx
DSPs

Education

Georgia Institute of Technology | Atlanta, GA

June 2016 — May 2019

Bachelors of Science in Computer Engineering, **GPA 3.74**

Minor in Computer Science and Systems & Architecture

Work Experience

L3Harris Technologies | Sunrise, FL

June 2019 — Present

Associate, Software Engineering

L3Harris is an aerospace and defense technology company, and a leading provider of tactical radios

- Engineer on L3Harris's new airborne HF radio to replace the Collins AN/ARC-190
- Main contributor of C code for the new HF DL feature's software-defined PSK modem
- Created a new fully-documented modem design from scratch to avoid replicating issues of the existing deprecated and poorly documented modem code, and provide a new baseline for further HF modem work
- Implemented the modem on the embedded DSP chip including complex components such as the preamble detector, channel equalizer, and frequency offset tracker

Georgia Institute of Technology | Atlanta, GA

August 2018 — May 2019

Head Teaching Assistant for Systems and Networks

Intro computer architecture and operating systems course, typically with 250-300 students

- Managed a team of 12 TAs
- Supervised the creation, release, and grading of assignments, including weekly homework assignments and biweekly projects
- Handled the administrative overhead of the course, such as fielding emails from students, and providing and updating course information such as grades and assignment schedules

Georgia Tech Research Institute | Atlanta, GA

May 2018 — August 2018

Student Research Assistant

Electronic Systems Lab (ELSYS) at GTRI specializes primarily in electronic warfare

- Designed a system convert realtime image data from a backend simulator (OpenEagles) to API calls for the external frontend program (Prepar3D)
- Created a multithreaded proxy server to exchange UDP data with OpenEagles and make RPC calls to Prepar3D
- Delivered the functioning system for demonstration after 1 month of work, with an accompanying ICD (interface control document)

Projects

JOS Graphical Interface and Windowing System

Fall 2017

Final design project for Design of Operating Systems

- Added a Windows-style graphical user interface to an existing text-based operating system, allowing the user to run processes in separate, movable console windows
- Wrote PS/2 device drivers from scratch to allow for mouse control
- Wrote CGA device drivers from scratch to provide graphics support through general purpose system calls