Dear [XXXX] Recruiter,

I hope this message finds you well. My name is Abhinav Avula and as a second-year student that is pursuing my Bachelor of Science in Electrical and Computer Engineering with a Minor in Computer Science at the University of Colorado-Boulder, I confidently feel that I am a perfect fit for the [XXXXX] role at [XXXXX].

I have had adequate coursework in relation to programming that has prepared me for this job. I have taken an introductory programming class in which I have mastered the C programming language, an embedded software engineering class and an embedded bare-metal programming certification which has allowed me to apply my knowledge of C, and a data structures class in which I learned the C++ language and gain knowledge of various data structures including arrays, linked lists, stacks, queues, binary search trees, graphs, hash tables, and heaps as well as a basic introductory understanding of algorithms. I also have done multiple projects that exemplify my programming knowledge. One project is from my data structures class, where I made a program using hash tables to sort through thousands of instances of professors at CU-Boulder and retrieve what classes they teach, searching on a last name basis. Another project I did was write a driver from scratch for an accelerometer on a Silicon Labs Thunderboard Sense 2 microcontroller. I used the SPI communication protocol and configured it to flash an LED when the accelerometer was tilted past a certain angular threshold. I participated in an ongoing research project where we analyzed data from solar flares and used different libraries such as NumPy and MatPlotLib to sort solar flare data collected from a satellite.

I also have adequate experience in circuitry and hardware design. I have taken two circuits classes where I have learned about linear circuit design, operational amplifiers, circuit analysis methods with controlled sources, and RC/RL circuits for both transient and steady-state response, transfer functions, frequency response, bode plots, resonant circuits, and Fourier series/transforms. I am currently in an Electronics Design lab class where I have been applying my knowledge of analog circuits to build a functional robot. I have adequate experience in digital circuitry and design to fulfill the minimum qualifications for the role. I have taken a class in digital logic, where I have learned about digital circuit design including but not limited to applications of digital logic circuits, combinational and sequential logic circuits, programming of FPGAs, and the Verilog and SystemVerilog hardware description languages. A project I did that exemplifies my hardware verification knowledge is a complex arbiter using a finite state machine in SystemVerilog, where a parameterized test bench was used to obtain and assess every possible output of bits that were input by a user in a round robin scheme. I have also taken a programming digital systems class, where I have used a DE10-Lite FPGA board to learn how to program in Nios-II Assembly, basic I/O, interrupts, caching, and pipelining.

One of my greatest qualities is my leadership and communication skills. This can be shown through one of my extracurricular projects in which I ran a school drive for elementary schools in my local area. It turned out to be extremely successful, and through this I was able to build and showcase many interpersonal skills such as communication, project planning, leadership, etc.

I would like to thank you for your time and consideration for this internship role. Please also take a look at my resume, as I have more about me listed there that may be of interest to you. I look forward to hearing back from you about an interview, and if you have any questions please do not hesitate to contact me at (720)-400-8337 or abhi.avula@colorado.edu.

Regards,
Abhinav Avula