ROSS STAUDER

ELECTRICAL AND COMPUTER ENGINEERING

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TO

Dept. of Mechanical Engineering

Colorado State University

FROM

Ross Stauder
Electrical and Computer Engineering

I am a 3rd year undergraduate ECE with a focus in electrical engineering, though my skill set often leans toward computer engineering side of things. I noticed that many of the required skills for the position are skills which I have a particular aptitude for, and have honed with lots of practice. Specifically Object-Oriented programming and Embedded System design, I have experience in both from several engineering design projects, as well as my time working as an intern at the CSU HEP Lab.

It seems to me that my primary task (at least in the immediate future) is designing a system to automatically feed process parameters to a 3D printer, as well as correcting any mistake happen during the printing process in real time. I would have to say that an ESP8266 would be your best bet for such a system. The ESP device has a built in WiFi chip which is necessary for making sure that the system can be watched and updated remotely at any time. Additionally, the ESP has a very high clock speed which is often useful when designing systems that make web requests. Comparatively, a RaspberryPi would work well also, as it has a built in WiFi chip as well. However, in the case of the Pi, embedded systems are often much slower to work, since the Pi has much less GPIO pins, and isn't made for realtime I/O applications.

This posting really caught my eye and I feel this position would give me lots of hands on experience with the development of micro-electronics and, moreover, experience working with engineers from other focuses, a valuable skill which I look forward to honing. I know without a doubt I'm capable of creating the kind of system you need, though I must confess that at this point I could only commit to an average of 10 hours a week. Between my classes and my other lab position, I will be stretched pretty thin with this position as well, though I have no qualms with working late nights or weekends to get the hours in.