

ALEXANDRA J. FORSYTHE
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SUMMARY:

Electrical and computer engineering student with a 4.0 GPA and 2 years of industry experience in PCB (PWB) layout, CCA design, build, test, and embedded systems. Searching for a 2019 summer internship.

SKILLS:

Active security clearance, Cadence, Eagle CAD, Altium, DxDesigner, PADS, LT SPICE, Perl, Verilog, VHDL, FPGA, VLSI, CMOS, PLC, ARM, DSP, embedded systems, UART, C, C++, Python, Java, HTML, Linux, Agile, Scrum, Matlab, Lean Six Sigma Certified Yellow Belt

WORK EXPERIENCE:

- **Ultra Electronics USSI** March 2018 to present
Electrical Engineer (Year-round intern)
 - Design, simulation, fabrication, assembly, and testing of electronic designs.
 - Design, develop, implement, and test embedded software.
 - Responsible for adding a daughter board to the controller board of an HS-10 to enable wireless streaming, and for updating the software to enable streaming via Bluetooth.
 - Developed schematics and generated Gerber files for PCB fabrication.
 - Peer reviewed schematic and board layout. Revised schematics and ran board level design rule checks (DRC). Worked with team to select and order parts for a new design project.

- **Raytheon** May 2018 to August 2018
Electrical and Computer Engineer (Summer Intern)
 - Part of team developing dynamic software for an autonomous collaborative system that will use artificial neural networks to enable UAVs (unmanned aerial vehicles) to work together to accomplish tasks and utilize the unique strength of each UAV. Wrote over 1700 lines of code.

- **NASA Langley** May 2017 to August 2017
Electrical Engineer (Summer Intern)
 - Designed a mission-critical circuit board that will be used on a lander.
 - Evaluated design architectures for a DC-DC buck converter for Navigation Doppler Lidar (NDL).
 - Created designs for highly efficient power and that fit within a minimal area.
 - Designed circuits; developed component models with Altium; ran LTSpice simulations.
 - Additional projects involved analysis, Webench simulation (SPICE - based simulator), Cadence, and correcting an existing buck regulator design.

- **Entrepreneur** October 2016 to Present
Circuit Board Designer
 - Design, build, test, and sell custom circuit boards to robotics enthusiasts.
 - Sole developer of control boards for current R2-D2 builders nationwide.

EDUCATION:

B.S. in Electrical Engineering and Computer Engineering, dual minors in Computer Science and Math. Indiana Tech. Presidential and Gill Scholar. GPA: 4.0/4.0

ACHIEVEMENTS AND AWARDS:

National Women in Computing Award (2018), VP of ACM (2018-19), VP of IEEE (2018-19), President of Math Club (2018-19), Student Executive Board (2018-19), CAD Mentor (2018-19), Member of SWE, Engineering Study Abroad Scholarships (Germany and Spain), 2018 National STEM Role Model, Alpha Chi National College Honor Society (top 10% of college juniors, seniors, grad students in the U.S.)

COMMUNITY SERVICE:

STEM Teacher (Coder Dojo, STARBASE STEM Camp, and Tech Engineering Camp); Limberlost State Historic Site Program Developer; Keynote speaker, editor, and author for several nonprofit organizations