Matthew Rana

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OBJECTIVE: To use my education and prior work experience to grow with a dynamic organization through creative problem solving and varied tasks.

EDUCATION: Bachelors of Science in Electrical Engineering, Clemson University, Clemson, SC Spring 2016

RELEVANT SKILLS: Proficient in

SolidWorks, C, C++, GNURadio, Python languages and UNIX environments *Machine Shop Fundamentals*
Microcontroller/SoM/FPGA Programming *GDT & Dimensional Analysis* *Cadence Capture & PCB Design*
Oral Communication & Presentation Skills *Microsoft Office Suite* *Through-Hole & SMT Soldering*

WORK EXPERIENCE

QA Technician, Edmund Optics, Barrington, NJ August 2018- February 2020

- Implemented test methodology with senior engineers to inspect materials with special handling requirements
- Reviewed in-house drawings to verify product conformance and conducted ECNs as required
- Assisted Research & Development team with advanced measurements and machining of custom critical components
- Reworked mechanical assemblies using machine shop resources when necessary

Contractor, Deepwave Digital, Philadelphia, PA November 2017- April 2018

- Integrated Nvidia, Xilinx and ADI hardware into single-board high-density Mini-ITX footprint
- Wrote Python code to utilize open source Industrial IO drivers to transmit and receive data
- Sourced or fabricated using manufacturer datasheets all PCB footprints for components
- Created and maintained cloud-based repository for OrCAD symbols and files

Co-op, Z-Axis/Bear Power Supplies, Phelps, NY May -August 2017

- Performed failure analysis and revised layouts for commercial and medical-grade products
- Constructed test fixtures & prototypes in-house to guarantee finished product would pass necessary client requirements
- Designed equipment to monitor production floor equipment operating conditions

DESIGN/BUILD PROJECTS

Oscillating Transducer, Z-Axis Inc Summer 2017

- Took charge of unique challenge that had been placed on backburner
- Designed and fabricated control board to oscillate a medical fixture to a specific resonance frequency
- Tuned finished product to range of several kilohertz with step resolution of less than ten hertz

2016 KEMET Engineering award winner: Electrical Engineering Senior Design Project Spring 2016

- Designed and constructed custom acoustic guitar auto-tuner incorporated into a guitar case
- Fabricated components via PCB design software and 3D printing
- Designed, printed, and populated circuit board for selecting and individually driving six stepper motors

AWARDS AND HONORS

Machine Shop Fundamentals, Camden Community College, Camden, NJ January-May 2019
Most Valuable Participant, NextFab Accessibility Hackathon April 2018
HackIoT Philadelphia LoRa Hackathon, Second Place December 2017
Ham Radio Operator, Technician Class March 2016
Eagle Scout, Boy Scouts of America Troop 451, Durham, NC Spring 2011