SUNAY BHAT

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EDUCATION

University of Tennessee **Knoxville, TN**

BS in Electrical and Computer Engineering (Summa Cum Laude) May 2017

PROFESSIONAL WORK AND RESEARCH EXPERIENCE

Lockheed Martin **Goleta, CA**

Systems Integration/Test Engineer Associate September 2017-Current

- Working on high level infrared detection and optical systems in complex aeronautics and defense systems.
- Helping advance infrared technologies and processes to exceed demanding customer expectations and continuously seek out new and innovative market opportunities.
- Engaging with various team members from a diverse set of backgrounds including data processing, chemistry, physics, and quality/systems engineering.

Nano Terra Inc. **Cambridge, MA**

Electrical Engineering Intern June-August 2016

- Designed and constructed multiple prototypes and initial commercial product requiring custom PCB and software design
- Facilitated communication between management, consulting firm, and product team as primary engineer working on hardware/software interface
- Improved product performance benchmarks and data transmission rates by an order of magnitude
- Provided vital assistance, development, and final designs as primary electrical hardware and component engineer to multiple project teams within the company

Oak Ridge National Laboratory-Manufacturing Demonstration Facility **Oak Ridge, TN**

Research Assistant July-August 2014

- Worked with state of the art 3-D metal and plastic printers along with accompanying software to predict microstructure as a function of thermal cycling
- Assisted research project on graded composition metals printing for many potential applications including streamlining of manufacturing processes
- Disassembled and troubleshot POM DED metal printer giving insight into internal mechanisms of the device and processes

ACADEMIC WORK AND RESEARCH EXPERIENCE

University of Tennessee, Knoxville **Knoxville, TN**

Research Assistant, Part Time – UT Nonwovens Research Laboratory August 2014-May 2016

- Developed a method to measure the electrical conductivity of high resistivity materials
- Evaluated conductivity of carbon nanotube (CNT) yarns and graphene reinforced polymeric fibers
- Conducted research on sound impedance of various fiber-based composites

Senior Design Project – Team Leader January 2017-May 2017

- Leading team designing automated robot tour guide of department building
- Completed custom PCB design, Arduino programming, electrical wiring, solder work, and documentation

LEADERSHIP/COMMUNITY EXPERIENCE

Student Athlete – Tennis (Team Captain from Fall 2015) August 2013-May 2017

- Balancing full athletic schedule including practice, travel, and competition while completing 14-17 hours of course work each semester
- Team representative for the Student-Athlete Advisory Committee from Fall 2015- Spring 2017
- Contributed over 50 hours of service to the Knoxville Community including work at: Volunteer Ministry Center, Beardsley Community Farm, and Dogwood Elementary School

HONORS AND AWARDS

- Chancellor's Honors Banquet Citation for Outstanding Scholar Athlete (2017)
- Chancellor's Honors Banquet Citation for Extraordinary Academic Achievement (2017)
- Athletics Board Recognition of Academic Achievement for Achieving a Superior GPA (2017)
- CoSIDA Academic All-District (2017)
- Dean's List College of Engineering – every semester in the college (2014-2017)
- Three-time SEC Academic Honor Roll and ITA Scholar Athlete Recognition (2014-2016)
- Two-time Men's Tennis SEC Community Service Team Recognition (2016-2017)
- Recipient of six departmental and college scholarship awards (2015-2017)

SKILLS AND SOFTARE

Technical Skills

- Extensive experience utilizing and refining quantitative techniques and data processing to meet technical specifications
- Experience using qualitative knowledge to make high level product decisions while providing feedback on an industry leading manufacturing processes
- Continuously improve quantitative metrics and specifications to better suit customer demands and emphasize product performance over conformity

Software Skills:

- Proficient in C++, Python, VHDL languages
- Worked with MATLAB and ARM Assembly Language
- Extensively used Mac OS, Windows/Windows Bootcamp, and Linux
- Worked extensively with Arduino IDE including writing custom libraries

Hardware and Electrical Skills:

- Soldering experience including through-hole surface-mount, and hot air rework
- Multiple custom PCB designs and assembly using Eagle CAD from CadSoft, and National Instrument's Ultiboard
- Integrated circuit design using Cadence Design software
- Transistor based amplifier and logic gate circuit design for university coursework
- Oscilloscope, signal generator, and DC/AC power source usage for university coursework

Laboratory Skills:

- Sample prep and image capture using Keyence microscopes
- Worked and studied in chemicals laboratories with extensive safety protocols
- Used machining tools such as band saw, extrusion plastometer, milling, filing, drill press, etc.