TOBENNA W. UZUEGBUNAM

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EDUCATION

Texas A&M University College Station | **December 2020**
Undergraduate degree: Bachelor of Science in Electrical Engineering | **[GPA: 3.6]**
Minor: Computer Science   **Honors:** Electrical Engineering Honors Student | **Seeking Summer Internship**

SKILLS: C++, Automation controls, Energia, Studio 5000, Solidworks, Allen-Bradley PLC Programming, Siemens PLC Programming, Fanuc Robot Programming, Keyence Vision Camera programming, Python, Verilog, Data Analysis, AutoCAD Electrical, Prototyping, Matlab, RoboGuide, Web Design, Adobe Photoshop, Adobe illustrator, Unreal, French

COURSEWORK: Computer Architecture and Design, Electronics, Electric Circuit Theory, Discrete Structure Computing, Electricity and Optics, Intro to Programming Design Concept, Data Structures and Algorithm, Programming Languages, Random Signals and Systems, Intro to Digital System design, Signals and Systems, Differential Equation, Linear Algebra

WORK EXPERINCE & PROJECTS

TESLA: AUTOMATIONS CONTROLS ENGINEERING INTERN
January 2019 – May 2019
Tesla Motors, Sparks, Nevada.
- Designed and created electrical drawings for training cells equipped with a 24V PLC, programmable I/O blocks and 6-Axis 1-phase Robot
- Assembled and programmed training robots that would save Tesla $1,645,000 in 5 years and $170,000 in the first year.
- Programmed conveyance and pallet distribution machine sequences for the creation of a new assembly line
- Revitalized data reporting on robots and machine functionally in my production line by 50% to support MOS monitoring.
- Developed and debugged ladder logic PLC code on Allen-Brady and Siemens PLCs for 20+ machines.
- Interfaced with conveyors, robots, Manufacturing Execution System (MES) through Network servers and Ethernet IP
- Generated aesthetically simple HMI screens for complex machinery to help troubleshoot stations

TESLA: MANUFACTURING DESIGN ENGINEERING INTERN
May 2019 – August 2019
Tesla Motors, Sparks, Nevada.
- Designed and developed manufacturing equipment and fixtures to support my early-stage prototype builds
- Determined and procured equipment that was used to build the Model 3 battery Module
- Programmed machines with respect to my developed manufacturing processes to increase cycle time by 25%
- Automated production line and processes with robots to save Tesla $440,000 every year and $2,200,000 in 5 years
- Used Solidworks to design End of Arm Tool used by robots to interface with products and raw materials
- Performed cycle time analysis on Automation project and ensured it met cycle time
- Created business justification for automation Project
- Programmed robots in RoboGuide to create simulations of automation processes
- Performed finite element analysis on structures I designed to hold the products

AERIAL SUPERVISION DRONE PROJECT
February 2018 - July 2018
- Designed and created cost-effective auto-leveling quadcopter from scratch with an Arduino Launchpad
- Programmed and debugged quadcopter to ensure functional flight system
- Used quadcopter to collect data for analysis and video for surveillance testing

UNDERGRADUATE RESEARCH FACILITATED BY NASA ENGINEER
August 2017 - June 2018
Texas A &M College of Engineering, College Station, Texas.
- Enhanced virtual reality "sandbox" of Mars and the Moon to re-create a realistic simulation
- Performed quality checks on static meshes to ensure it met NASA's specification and design
- Tested and modified Virtual reality "sandbox" to enhance the conceptualized game environment

VEHICLE CRISIS RESPONSE PROJECT
January 2017 - May 2017
Texas A&M College of Engineering, College Station, Texas.
- Created a wirelessly controlled four-wheeled robot which was sponsored by Texas Instruments
- Led the execution of effective electricity transfer between systems and used innovative techniques to resolve miscalculations during construction and assembly
- Analyzed environmental data collected with robot's sensors

INVOLVEMENT

Institute of Electrical and Electronics Engineers (IEEE) - *Electronics Chair*
August 2019 - Present
- Create and host workshop to teach 200+ members how to create circuits and program microcontrollers

National Society of Black Engineers (NSBE) - *Telecommunications Chair*
August 2018 - Present
- Used knowledge of CSS and Website design to create new NSBE website

Discover Explore and Enjoy Physics (DEEP) – *Research Assistant*
September 2016 - May 2017
- Presented to 100+ students on my research on the use of a motor and a probe light to create an animation.

Resindent Advisor (RA)
January 2017 – Deceember 2018