Zion Joseph de Goes

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OBJECTIVE: Hardworking first year student looking to apply learned skills to a summer 2025 internship.

EDUCATION
Rensselaer Polytechnic Institute (RPI), Troy, NY   May 2028
Bachelor of Science in Electrical Engineering
GPA: 3.50

RELEVANT COURSEWORK
Introduction to Mechatronics learning and applying theory for sensors and actuators: discretization, sampling, integration, differentiation and filtering
Embedded Control building embedded systems using firmware coded in C and additional circuits to control microcontroller peripherals

SKILLS
CAD, C++, C, MATLAB, Python, Simulink, Microsoft Office, Digital instrumentation, Analog circuit design, Soldering

WORK EXPERIENCE
Rensselaer Polytechnic Institute, Troy, NY   January 2025-Present
Lab Technician, MercerX Laboratory
- Contributed to a university lab focused on disseminating electrical and computer systems engineering knowledge
- Built a hub of technical knowledge while maintaining lab equipment and assisting researchers
- Maintained PSU's, oscilloscopes, soldering stations and assisted with circuit debugging and microcontroller use

United States Embassy of Tanzania, Dar es Salaam, Tanzania   June 2024-July 2024
Radio and Telephone Intern
- Catalogued and inventoried 200+ telecom assets (radios, phones, line cards) using government website systems
- Worked with experienced embassy personnel to install radios and use radio-frequency tools
- Used State Department systems to request and submit tickets for disposals, renewal, and repair

RELEVANT PROJECTS
Twiga Design Team   October 2022- May 2023
Lead Designer, International School of Tanganyika
- Partnered with local Tanzanian community (Gongo Village) to design a playground
- Conceptualized and built 4 individual play structures using locally sourced materials and woodworking tools
- Increased school retention rates and created an incentive for young rural students

Proto-TekCo   August 2023- March 2024
Lead Designer, Dar es Salaam, Tanzania
- Collaborated with an experienced design mentor to uplift local community school (Mzambaruni Deaf School)
- Identified the issue of harmful broken plastic chairs and engineered four pieces of furniture to fully seat the class
- Increased comfort for rural deaf Tanzanian students

Proto-TekCo   September 2023- November 2023
Sole Designer, Dar es Salaam, Tanzania
- Identified a blind community member in need and formulated a design solution to increase accessibility
- Designed and engineered an electronic seeing cane using sensors and sound actuators powered by a microcontroller
- Organized process into full design report containing problem found, design justification, plan for manufacture, and test and evaluation

ACTIVITIES
RPI Robotics Club, Troy, NY   August 2024-Present
RPI Embedded Hardware Club, Troy   August 2024-Present