Preston Ward

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Education

University of Nebraska-Lincoln, | Lincoln, NE

Bachelor of Science in Computer Engineering

August 2022 - Present

Skills

Python, C/C++, C#, Assembly Language Programming, Java, PCB design, Robotics, Linux, PyTorch, SQL

Relevant Coursework

Physics 1 & 2, Computer Science 1 & 2, Circuits 1 & 2, Discrete Mathematics, Computer Organization, Embedded Systems, Data Structures and Algorithms

Experience

Research Assistant - *May 2022 - Present*

- Designed and implemented inverse kinematics algorithms, aiming to control a Baxter robot via an Oculus Quest VR headset.
- Developed cross-platform communication framework for ROS-enabled robotic systems.

Member on Electrical Engineering Design Team | UNL Aerospace Club – *March 2022 – Present*

- Designed and fabricated PCBs for satellite components, ensuring optimal performance and reliability.
- Conducted rigorous electrical testing and troubleshooting of integrated systems, identifying, and resolving issues to meet project milestones and launch deadlines.

Software Developer | UNL's Research Engineering and Design Teams - *August 2022 – May 2023*

- Created intuitive and user-friendly UI interactions that streamlined tasks within space exploration missions.
- Facilitated product validation and delivered a comprehensive presentation to NASA scientists and engineers.
- Developed a C# Unity application in an Agile development cycle.

Literature Reviewer - *August 2022 - December 2022*

- Engaged in literature analysis relating to tele-robotics in remote laboratories.
- Presented my findings to a panel of professors in the Department of Electrical and Computer Engineering

Publications

A novel Approach to Engineering Education Laboratory Experiences through the Integration of Virtual Reality and Telerobotics (Accepted, Pending Publication) | American Society for Engineering Education | August 2023

Projects

Integrating Python speech recognition with a natural language processing deep learning model using PyTorch, NumPy, and SpeechRecognition