Cleiver Ivan Ruiz-Martinez

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Summary — Electrical and Computer Engineering major with a focus on robotics and embedded systems, specializing in industrial solutions and providing educational resources.

Education

Lipscomb University

Bachelor of Science in Electrical and Computer Engineering

Minors: Applied Mathematics

Skills

Programming Python (Certified), C++, MATLAB (Certified)
Frameworks PyTorch, ROS (Certified), Computer Vision
Tools Git, LTspice, CAD, Linux, Virtual Environment

Research Technical and Proposal Writing, Open Science (Certified)

Leadership

President/Founder FUTURO, Lipscomb University
Engineering Ambassador, Lipscomb University
Student Leader & Speaker, Tennessee Campus Civic Summit
Youth Fellow, Tennessee Immigrant & Refugee Rights

2022 - Present 2023 - 2024

2021 - 2023

2024 - Present

Experience

Raymond B. Jones College of Engineering

May 2024 - Present

Robotics and AI Researcher

- Led a team of five in the 2024 RoboCup Autonomous Robot Manipulation (ARM) Challenge, raising \$6,500 in funding and winning 3rd place in an international competition.
- Member of the Vanderbilt Lab for Immersive AI Translation (VALIANT), contributing to collaborative research projects and investigating artificial intelligence models for motion planning.

NASA L'SPACE August 2023 – May 2024

Principal Investigator (PI)

Spring 2024

- Authored key sections of a team proposal addressing NASA's challenges in Flight Computing and Avionics, competing for a \$10,000 award among 35 teams.
- Developed an AI-driven, reconfigurable FPGA proposal designed to enhance the resilience of electronic systems against Single Event Upset (SEU) effects.
- Directed and served as the Primary Reviewer for a review panel, assessing and scoring three proposals submitted during the NPWEE Solicitation.

Electrical Engineer/Project Manager

Fall 2023

- Co-Authored technical papers for Mission Concept Review (MCR), System Requirements Review (SRR), Mission Definition Review (MDR), and Preliminary Design Review (PDR) for a Discovery-class mission.
- Formulated power system requirements and conducted comprehensive trade studies for each section of the power system.

MaryFer Construction LLC

December 2022 - August 2023

Construction Assistant Manager

- Applied 5+ years of trade expertise to manage full-cycle construction projects from planning through completion, ensuring on-time and under-budget delivery
- Drafted professional contracts, memos, and invoices while utilizing bilingual translation skills to facilitate clear client communications

United Parcel Service (UPS)

March 2020 - September 2022 June 2022 - September 2022

Building and Systems Engineering (BaSE) PT Supervisor

- Monitored conveyor defects, discovering the root cause, and dispatching Specialists/Maintenance Mechanics to resolve system performance issues.
- Managed and communicated daily with 20+ workers ranging from mechanics, operations, and corporate managers to reduce system defects and equipment downtime.

Warehouse Worker March 2020 – June 2022

- Safely loaded 10,000+ packages/day onto delivery trucks, while adhering to company safety standards.
- Balanced working 25+ hours/week while attending engineering classes.

Projects

Robotic System Design

- Franka Emika Research 3 Software Suite
- Autonomous Navigate-Collect Robot
- UR5e Robotic Arm Software Suite

AI Model Design

- 2-Layer Neural Network (Digit Recognition MNIST Dataset)
- PAC-MAN Reinforcement Learning Agent
- DDPG Algorithm for Panda Arm ControlCNN Classification Network (CIFAR-10 Dataset)

References

Dr. Juan Rojas Suarez del Real

Assistant Professor of Electrical and Computer Engineering

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Alisha Milbry

BaSE Manager, United Parcel Service (UPS)

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