

Eloy Ulises Lopez Ramirez

 Houston, TX

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 EloyUlisesLopez

 React-Folio

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EDUCATION

The University of North Texas
Denton, TX

B.S. Mechanical and Energy Engineering, Computer Science Minor
Graduated: May 2023

WORK EXPERIENCE

Robotic Field Engineer I | Square Robot - Houston, TX

April 2025 - Present

- Operated a tethered robot that uses Phased Array Ultrasonic Transducer probes to scan in-service hydrocarbon storage tank bottoms, optimizing scanning paths to improve data coverage and be time efficient while coordinating with a tether technician
- Managed robot navigation, data collection, timestamps, and extensive Environmental Health and Safety documentation such as pre/post-dive checklists, Field Level Risk Assessments, and work observations
- Performed mechanical and hardware updates by interpreting engineering drawings using Fusion360 Product Lifecycle Management, applying torque specifications, redlining drawings, and fabricating components through drilling, measuring, cutting, and sanding
- Collaborated with engineering and operations teams while using Monday.com and Google Workspace to review project details, past job reports, and document tank conditions and operational issues

Contract Deployment Engineer | Amazon Robotics via TEKsystems - Shreveport, LA

April 2024 - April 2025

- Performed daily quality checks on 400+ semi-automated and robotic stations, verifying safety compliance, correct assembly, and operational performance
- Completed routine maintenance on robotic components—including suction systems, filters, conveyors, cameras, and sensors—to prevent failures and maintain consistent operations
- Coordinated with third-party assemblers and engineers to resolve quality failures, document issues, and implement corrective actions
- Utilized Slack and Asana for task tracking and communication, and created detailed tickets on equipment failures to support future updates and documentation

PROJECTS

3D Printed Vehicle Snorkel | Fusion 360, Cura, MeshMixer

November 2023 - February 2024

- Crafted a custom snorkel for a vehicle's air intake using Fusion 360, optimizing for functionality and aesthetics
- Sliced and printed components using Cura and an Ender 3 Pro, adjusting infill, supports, and quality settings to reduce material cost
- Used MeshMixer to segment pieces for printability, then sanded and polished components for final installation

Sound Reduction Drone Senior Design Capstone | Linux, Raspberry Pi, MATLAB

August 2022 - May 2023

- Established an Active Noise Cancellation system that reduced drone sound emissions by 28.5 decibels, earning first place team recognition for innovation design
- Programmed Python scripts on a Raspberry Pi 4 to record and output audio signals, applying real-time phase inversion to counter incoming frequencies
- Utilized MATLAB for frequency analysis, converting audio files into visual frequency graphs and exported data to Excel for validation
- Documented results and procedures to compare progress and present to the senior design class and sponsors

SKILLS

SolidWorks | Fusion360 | Cura | 3D Printing | MeshMixer | C++ | HTML | CSS | GitHub | MATLAB | React | Linux | VSCode

LEADERSHIP EXPERIENCE

Society of Hispanic Professional Engineers Dallas Fort-Worth (SHPE DFW) | Marketing Director

April 2024 - April 2025

- Strengthened chapter engagement by fostering an inclusive and collaborative environment, speaking with students and sharing job, volunteer, and social opportunities through SHPE's social media platforms
- Created and managed media content that expanded student engagement, reaching 10+ students per event/post and promoted community involvement and professional development