Erik L. Guier

904.657.1798 • ErikGuier@gmail.com• Online Portfolio: https://erikguier.wixsite.com/website

Detail-oriented graduate with a B.S. in Mechanical Engineering. Proficient in understanding and working with mechanical systems. Effective and thorough communicator who thrives in a team environment. Fluent in two languages (English & Spanish) and excels under pressure. Key skills include:

Requirements & Specifications Analysis • Project Coordination • Adaptability • Six Sigma
Prototyping • Design Analysis • CAD/CAM • Data Collection • Components Analysis • Creativity
Additive Manufacturing • Attention to Detail • 3D Modeling • GD&T• Team Collaboration

Education

Obtained Bachelor of Science (B.S.) in Mechanical Engineering – (University of Central Florida)
Notable Courses: Thermodynamics II, Mechanical Systems, Fluid Dynamics, Vibrations & Controls, Heat Transfer
Activities: Theta Tau Professional Engineering Fraternity – President, 12/2023 to 05/2024

Certifications

SolidWorks Associate Certification • Autodesk Certified User – Inventor & AutoCAD • Six Sigma Yellow Belt
OSHA 10-Hour General Industry Certification • MSSC Production Technician Certification

Experience

Research Assistant / L.I.M.B. Lab VR 3rd Arm & Custom Transradial Bypass / Orlando FL *01/2024 to 7/2024*
- Lead research initiatives in support of a Virtual Reality 3rd Arm Project in which neural EEG signals are utilized to command virtual arms movements
- Gathered EEG data from a controlled trial to train a custom machine learning algorithm using Python
- Tested and adjusted algorithm to decode EEG signals in real time, prioritizing speed and efficiency
- Designed a custom transradial bypass system to seamlessly incorporate a prosthetic hand, Arduino, and power supply
- Custom fit enabled for an easy twist-off connection to the prosthetic hand while maintaining stability

Modeling & Simulations Team Member / University of Central Florida / Orlando FL *08/2023 to 05/2024*
- Advanced the design and manufacturing of an Auto Temperature Controlled Prosthetic Socket
- Defined design requirements, specifications, and identified failure modes
- Assisted in creation of EDS document to outline all research, components, and functions associated with the socket
- Produced a prototype using additive manufacturing to identify design issues
- Adjusted dimensions of the socket to reduce weight and increase comfort while maintaining structural integrity
- Executed simulations on the socket adhering to the demands of ISO 10328

Solution Integration Intern / Siemens Energy / Orlando FL *06/2022 to 12/2023*
- Contributed to the design of new systems to be integrated into dated power plants
- Performed calculations to verify specifications of systems
- Completed a techno-economic design analysis of a proposed plant to display effectiveness in market
- Ensured system safety and efficiency while employing the laws of thermodynamics

Code Lead / University of Central Florida (TI-RSLK Maze Challenge) / Orlando FL *08/2019 to 12/2019*
- Coordinated team meetings to discuss the progress of the code and communicate ideas
- Collaborated with team members to design and test robot on sample mazes
- Adjusted code and utilized C programming to improve the robot's performance with unassisted movements

Materials Lead / ACE Mentorship Program / Jacksonville FL *09/2017 to 03/2018*
- Researched materials for potential usage in the redesign of the Jacksonville Landing
- Determined material specifications and sustainability while remaining focused on building efficiency
- Considered the locals needs and interests in the overall design and goal of the building

Technologies / Tools

SolidWorks • Fusion 360 • Python • Quickdocs • ANSYS • Cura • Microsoft Office Suite • Visual Studio Code
SAP • Revit • Teamcenter • LabVIEW • Inventor • AutoCAD • EES • MATLAB • C • C++