Parsa Rezaei

Computer Engineer — Technology Specialist

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Education

California Polytechnic State University-Pomona *2021-Present*

MSc. Electrical Engineering

BSc. Computer Engineering, GPA: 3.27

Activities: Reconfigurable Space Computing Laboratory (RSCL), Edison STEM-NET Scholar, Maximizing Engineering Potential (MEP)

California State University-Sacramento *2019-21*

BSc. Computer Engineering, GPA: 3.38

Activities: Institute of Electrical and Electronics Engineers (IEEE), Competitive Robotics (CompRobo), MESA Engineering Program (MEP)

Work Experience

Research Assistant *Research Project for U.S. Navy - Oct 2023-Present*

- Designed comprehensive testing strategies focused on enhancing speech recognition algorithms based on findings that addressed **3** primary obstacles affecting pilot effectiveness with current unmanned aerial vehicle systems.
- Evaluated and implemented advanced machine learning algorithms, including **PyTorch**, **OpenCV** and **YOLO**, to optimize flight operations and enhance situational awareness.
- Constructed an advanced front-end interface for real-time operations, integrating control systems and sensor data; the solution is now utilized by **10+** operational teams, fostering enhanced collaboration and streamlined decision-making.
- Engineered an advanced drone control framework using Natural Language Processing to enhance individualized command execution; reduced response time for complex maneuvers in high-density environments by over **3** seconds on average.

Lab Manager *Reconfigurable Space Computing Lab - Jan 2024-Present*

- Managed **15** research projects focused on advanced drone and computing technologies, leading **3** projects to finalist positions in the NASA MINDS competition.
- Led multidisciplinary teams in designing and developing autonomous drones, reconfigurable computing systems, and modular hardware.
- Directed the implementation of ROS2-based autonomous navigation, integrating sensor fusion, cryptographic communication, and SLAM.
- Fostered cross-team collaboration and coordinated efforts across research teams, ensuring adherence to competition standards and spec-sheets.

IT Intern *Keysight Technologies - May 2021-2024*

- Engineered and deployed advanced remote actions and automated campaigns using Nexthink, optimizing system management across a network of **25,000+** computers.
- Designed and developed **100+** comprehensive dashboards for real-time performance monitoring and data analysis, enhancing decision-making capabilities.
- Led and executed **20+** software engineering projects focused on automating critical IT processes, significantly improving operational efficiency, reliability, and scalability.
- Collaborated with external contractors to design and implement automated driver update systems for Dell and HP computers, streamlining device management and reducing downtime.
- Applied Agile methodologies (Scrum) to drive iterative development, enhance cross-functional team collaboration, and ensure timely project delivery with high-quality outcomes.

Skills

Programming Languages: Python, C++, Java, C, MATLAB, Embedded C, x86 Assembly, Verilog, SystemVerilog, SQL

Development Tools/Platforms: Docker, OpenCV, YOLO, PyTorch, Matlab, SolidWorks, Vivado, Agile/Scrum methodologies

Hardware: FPGA, Microcontrollers, ESCs, 3D Printing, Software Defined Radios, Satellite Communication, Network Infrastructure

Systems Design: CAD , Object-Oriented Design, Signal Processing, Digital Filters, AI Integration, Systems Analysis

Soft Skills: Project Leadership, Strategic Planning, Collaborative Problem Solving, Adaptability, Team Collaboration