ALEXEY GALLEGO
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EDUCATION.

B.S. Mechanical Engineering - Florida International University   **May 2021**
FANUC Robot Programming | Vision | PLC Certifications

PROFESSIONAL EXPERIENCE.

Product Development Engineer *(Software Developer, R&D)*   **07/2021- Present**
Encore Automation, Auburn Hills, Michigan
- Improved marketing efforts and lead generation by collaborating with the sales team to develop a brand new website, improving overall UX/UI and implementing web page data analytics and SEO features.
- Built multiple Graphical User Interfaces tools interfacing with FANUC robots and PLC devices improving efforts in data collection and visualization and increasing automated processes efficiency by implementing advanced software algorithms.
- Increased operational efficiency by developing internal software tools for accounting, inventory management, and other key business processes.

Product Development Engineer *(Mechanical Engineer, R&D)*   **07/2021- Present**
Encore Automation, Auburn Hills, Michigan
- Designed and developed a patent-pending robotic end-of-arm tool that significantly improved the speed and precision of sealant application on moving automotive lines; this system is now deployed across multiple plants in the U.S. and Canada.
- Led iterative prototyping and development of several new robotic tools, directly contributing to the company's expanding product lineup and enabling quicker deployment of innovative solutions.
- Reverse-engineered and optimized key mechanical components, reducing material and manufacturing costs while improving adaptability for custom industrial needs.
- Oversaw full-cycle system installations at customer plants, working closely with managers and operators to ensure high-performance, reliable integration—and earning strong relationships that reinforced the company's reputation for technical excellence and service.
- Conducted rigorous testing and performance evaluations, helping refine designs for real-world industrial use and boosting the overall effectiveness and efficiency of deployed systems.
- Troubleshot and resolved critical system issues under pressure, often on-site, minimizing production downtime and helping customers maintain operational continuity with confidence.

Assistant Manager/Lead Repair Technician   **07/2020 – 07/2021**
Ubreakifix, Miami, FL
- Managed a team of repair technicians and customer service agents increasing store efficiency and increasing store revenue by 50%.
- Led repair rankings in the Miami stores as a Google, Samsung, and Apple Certified technician.
- Managed inventory and processed purchase orders to ensure efficient operations and timely supply fulfillment.

Technology Co-Op   **01/2020 – 05/2020**
GE Appliances, Louisville, Kentucky
- Identified defects in AC Heaters and improved its efficiency by 40% leading to successful deployment of new features for the AC Ductless Product Line.
- Designed, Built, and Test A/C Ductless components satisfying all functional requirements and outperforming competitor products.

Engineering Course Assistant *(Statics)*   **01/2019 – 12/2019**
Ubreakifix, Miami, FL
- Taught students to use concepts of Calculus and Physics to solve complex engineering problems.
- Collaborated with the professor to guide students in class towards a better understanding of engineering fundamentals. Conducted tutoring sessions to facilitate help to students and answer course-related questions.

PROJECTS

Data Analytics Software Application: Utilized python to design, build, and test a software able to communicate with a FANUC robot and extract crucial pressure sensor information increasing process reliability to 99%.

Business Management Software — Full Stack Web App: Designed and built a web application for managing employee work hours, expense reports, and payroll, improving operational efficiency by 50%.

Autonomous Harvester: Incorporated Computer Vision to construct an autonomous strawberry harvester speeding up the collection process of gathering fresh strawberries.

External Pipe Crawler Arm: Designed a robotic arm for a pipeline inspection crawler to measure wall thickness of non-metallic oil pipelines, using SolidWorks and ANSYS to optimize strength and performance through static load simulations. Decreased overall system power consumption by 97%.

BMW Race Car's Gearbox Redesign: Race Car Gearbox Redesign: Reengineered a BMW M6 GT3 gearbox to improve top speed by 7% and enhance acceleration through optimized gear ratios, validated using MATLAB simulations and AGMA safety factor analysis.

SKILLS

Mechanical: Solidworks, 3D Printing, Matlab, Microcontrollers, FANUC Robot Programming, PLC Programming, SQL.
Programming: JavaScript, ReactJS, React Native, NodeJS, Python, FastAPI, Django Framework, SQL, Mongodb, Docker, Kubernetes, Arduino, AB PLC, Java.