ALEXA DE LA GARZA

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EDUCATION

University of Houston — Expected Graduation: May 2021
Bachelor of Science in Computer Engineering Technology

- GPA: 3.7
- Relevant Coursework: Embedded Systems, Microprocessor Architecture, Semiconductor Devices, Digital Logic Systems.

PROFESSIONAL EXPERIENCE

Data Analyst Trainee – University of Houston Data Analytics Bootcamp, Houston, TX — May 2020 – Aug 2020

- Scraped and manipulated data from different sources using Excel.
- Leveraged Tableau to build and maintain reporting systems and dashboards to supported key business decisions.
- Applied statistical knowledge (t-test, A/B Hypothesis, Linear Regression, etc.) and business analyses to evaluate real life data sets.
- Examined, interpreted and presented results of analytical initiatives to stakeholders for certificate training.

Research Intern - University Pairs-Saclay, Paris, FR — June 2019 – July 2019

- Conducted experimental research involving mechanical stress on ferromagnetic materials through Finite Element Analysis techniques.
- Achieved optimal configuration of Eddy-Current Probe through simulation testing on COMSOL Multiphysics.
- Performed data analysis of results and prepared weekly reports for future IEEE publications.

RELEVANT PROJECTS/ COMPETITIONS

SAADA Air Flight System - AFRL 5G Beyond Challenge, Dayton, OH — Sep 2020 – May 2021

- Collaborating with a team of 4 university students by implementing a 5G Mesh Network for UAV's to be remotely controlled and linked to each other during rescue missions.
- Refining an encrypted network that detects receivers trying to intercept communications or join network without permission.
- Directing and managing the development of a path planning method on MATLAB for UAV's using swarm intelligence algorithms.
- Researched the most efficient way to ensure lowest cost production, resulting in 75% decrease.

Autonomous Recycle bin - College of Technology Department, Houston, TX — Oct 2019 – Nov 2019

- Contributed to team of 4 in development of an interactive Autonomous Recycle bin for the Sustainability Department.
- Developed and wrote interrupt driven C++ code for embedded system to detect materials such as cans, glass bottles, and plastic bottles.
- Evaluated collected data on LabVIEW to analyze signals from different sensors (RGB, Capacitive, Load Cell).
- Executed stringent self-imposed deadlines, exceeding expectations of delivery for the project.

Light Following Robot - College of Technology Department, Houston, TX — April 2019 – May 2019

- Lead team of 3 students in the development of a light following robot to improve overall mechanism of military automated robots.
- Incorporated 555 timers, servo motors, and light sensors into a system, without the usage of microcontrollers.
- Continuously increased hardware troubleshooting and debugging knowledge.
- Presented results to the College of Technology Engineering Department for final robot design.

TECHNICAL SKILLS & CERTIFICATIONS

Programming: C, C++, Python, JavaScript, HTML, CSS, React Native, Node.js, Expo.
Software: Tableau, GitHub, Microsoft Office, Jupyter Notebook, NI Multisim, NI LabVIEW, AutoCAD, MATLAB, COMSOL.
Hardware: SW/HW Troubleshooting & Debugging, Electronic Test Equipment, Electronic Circuit Design, FPGA, USRP.
Systems: Windows.

LEADERSHIP DEVELOPMENT

College of Technology Ambassador — Aug 2019 – May 2021

- Administrated annual Edison Lecture Series to inspire 400 high school students to explore STEM fields.
- Attended career fairs to inform high school students about opportunities within the College of Technology.
- Increased high school student's involvement by 35% through effective management of communication.

Succeed in Engineering Technology Scholar – President — Aug 2019 – May 2020
Benjamin A. Gilman International Scholarship — May 2019 – Aug 2019