Alexis J. Renderos

Computer Engineer

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Education

B.S. Computer Engineering @ Iowa State University
Aug 2018 – May 2022 / Ames, Iowa

- Recognized as a Google Hispanic Student Leadership Scholar
- Code2040 Finalist

Work Experience

Software Engineering Intern / Campus Ambassador @ Collins Aerospace
May 2019 – Present / Cedar Rapids and Ames, Iowa / Active Security Clearance: Secret

- Developed mission-critical software using **C++** for the ARC-210 family of military aircraft radios.
- Designed and maintained automated tests in **Python** for regression testing.
- Generated documentation using **PlantUML** to describe key system features.
- Practiced **Agile** and **Scrum** in 2-week sprints with a team of 10 developers.
- Represented Collins Aerospace by sharing information and personal experiences with students at Iowa State University and prospective hires.
- Served as a liaison between the student body and Collins Aerospace.

Assistant General Manager of Broadcast @ 88.5 KURE Ames Alternative
Sept 2018 – Present / Ames, Iowa

- Oversaw all broadcast functions, ensuring the station met FCC requirements.
- Managed a team of 10 broadcast committee members in addition to 50 DJs and talk show hosts.
- Introduced and implemented program management methodologies, including formal milestone-based plans and clear definitions of budgets, targets and priorities.
- Worked closely alongside local businesses and prominent community members to develop strategic partnerships.

Systems Support Specialist @ Iowa State University Biology IT
Feb 2019 – May 2019 / Ames, Iowa

- Worked constructively with researchers and professors to develop innovative technical solutions.
- Analyzed new and emerging technologies for researchers to implement.
- Generated and maintained documentation to develop and curate a knowledge base to educate future S^{3}'s.

Makerspace Technologist @ Ela Area Public Library
Aug 2016 – Aug 2018 / Lake Zurich, Illinois

- Developed, taught and evaluated a variety of technology and maker programs.
- Researched new and emerging technologies to present to the library director.
- Generated and maintained documentation, reports, and statistics to foster the development of the makerspace.

Robotics Engineering Intern @ Engis Corporation
June 2016 – July 2016 / Wheeling, Illinois

- Assisted in the operation and maintenance of robotic systems.
- Ensured part quality and consistency throughout the manufacturing process.
- Interpreted data collected during manufacturing for Engis employees.

Software and Electrical Mentor @ FIRST Robotics Competition
May 2018 – Present / Lake Zurich, Illinois / Team 2358 "Bearbotics"

- Assisted team members with developing **C++** and **Python** code in addition to designing electrical and mechanical systems to control a 130lb robot.
- Effectively communicated with other team mentors to create a cohesive curriculum and documentation for new members.

Skills

Programming Languages
C, C++, Python, HTML, CSS, JavaScript, Java, Kotlin, Go, PHP, SQL, Verilog, VHDL

Libraries & Frameworks
TensorFlow, Keras, OpenCV, Node.JS, Express, React, Babylon.JS, Bootstrap, ROS

Tools & Software Applications
Git, CI/CD, Amazon Web Services (AWS), Google Cloud Platform, Heroku, AutoCAD, Inventor, KiCAD, Quartus Prime, Adobe Creative Suite, Android Studio, LaTeX

Languages
English, Spanish, German

Organizations

Cyclone Rocketry

- Avionics Team Member

Friley Residence Hall Executive Board

- Financial Director

FIRST Robotics Competition Team 2358

- Software and Electrical Captain

Awards

HackISU 2018

- Best Rookie Hack

HackUIOWA 2019

- Best Use of .xyz Domain

FIRST Robotics Competition

- 2016-17 Dean's List Finalist
- Innovation in Control Award

Projects

Lifedrinker
Convolutional Neural Network (CNN) taught to identify a chosen object of interest at range using a live camera feed in conjunction with a **Python-based OpenCV** tracking algorithm to assist in the detection, identification, and tracking of the target.

Clark
60 pound semi-autonomous custom designed and fabricated robot running on **ROS**. It uses a variety of sensors and a network of cameras in order to navigate its surroundings.

7Words
Python-based web tool launched on **Heroku** intended to mass lyric check a set of songs. It uses the Genius and Spotify APIs to search through a playlist of songs for language that could go against FCC broadcasting guidelines.