Cesar Rodriguez

cero@umich.edu (773)-396-2850 in/cerod

EXPERIENCE

Space Systems Analysis and Test Intern, Group 95

MIT Lincoln Laboratory **May 2023 - September 2023, US, MA, Westford**

- Developed PXE boot server to automate Red Hat Enterprise Linux 8 install through secure shell scripting, which applied to Group 95 distributed infrastructure - reduced backend deploy and times by 95% or more with PXE Boots, reduced setup complexity by 50%.
- Enhancing location estimation accuracy through satellite data systems analysis and developing test protocols to validate design changes. Reduced location errors through scripted unittest and probing.
- Maintained a 100% pass rate on all federal operational security technology audits, by implementing appropriate hardware and information security requirements and managing secure top-secret level information.

Software Development and Validation Intern Engineer/Cohort Lead

Intel Corporation **May 2022 - August 2022, US, CA, Folsom**

- Created a plugin for an internal tool enabling integration with the Converged Security Management Engine in BIOS Images, improving the quality of firmware.
- Re-engineered system architecture to ensure compatibility with external team's images, promote standardization, and create more resilient technology.
- Develop scripts in Python, Bash, and SLN that reconcile differences between a team's images and existing images while reducing threat possibility.
- Improved software maintainability by restructuring class hierarchy, allowing for interoperability with new firmware engine.
- Conduct code reviews and utilize pair programming to develop and implement new features.

Freelance Data Analyst

University of Illinois Chicago **December 2017 - May 2022, US, IL, Chicago**

- Extract unstructured data from image sources and clean to produce human interactable large data set for use by non-technical Museum Studies Program students and faculty.
- Perform formatting and analysis to support research into government accountability by Museum Studies Program faculty.
- Design data structure to promote ease of use, scalability, and accessibility on data research platform accessed by tens of thousands of users.

Client Advanced Validation Software Engineering Intern/Cohort Lead

Intel Corporation **May 2021 - August 2021, US, IL, Chicago**

- Standardized the stress testing operating system for validating 14th generation central processor units, resulting in increased performance and reliability of the stress testing process pre-launch.
- Integrated outdated methods and plugins from different teams, resulting in 4 Intel recognitions, approximately 4% time savings, and provided technical leadership to 3 interns iterating over several development cycles.
- Developed and evaluated simulated models to test CPU functionality on FPGA, resulting in a report of findings and recommendations to the CPU team.
- Trained international team members on usage and implementation of FPGA simulated model for testing CPU functionality and performed user onboarding, resulting in improved collaboration.

Research assistant, Cardiovascular Technology

University of Michigan **October 2019 - May 2020, US, MI, Ann Arbor**

- Shape user-facing products by interviewing medical professional end-users to identify shortcomings in emergency response to cardiovascular arrest and problems that increased response times.
- Wrote production code for application to improve communication between medical personnel that reduced response time from 7 minutes to 5.5 minutes by automating note-taking and streamlining the communication process through UI and user experience design.
- Worked as part of team of UX researchers to study impact of application on medical response times and adjust app according to results.

EDUCATION

University of Michigan, Ann Arbor May 2023

University of Michigan · US, Michigan, Ann Arbor · 2023 · 3.55

- Bachelor's of Science in Engineering in Computer Science 3.55/4 GPA

INVOLVEMENT

Member

University of Michigan · Michigan Artificial Intelligence Safety Initiative · September 2022 - May 2023

Member

Society of Hispanic Professional Engineers · September 2019 - May 2023

SKILLS

Software: Photoshop, Cadence Perspec, Arduino, 3D Printing, circuit design, CAD design, GitHub, AWS Services,and Visual Studio, Programming Languages: SLN, Python, C++, C, Latex, R, Matlab, experience in Verilog, React, Node.js, and Java, Operating Systems: Windows, Linux, Linux Redhat, Ubuntu, Mac OS, VIM, Microsoft Office, with experience in AutoCAD, Soft-skills: verbal communication, speaking, debate, writing. Conceptual frameworks: machine learning, language processing, object oriented design, functional programming, probability, statistics, Bayesian Analysis