

Jesus Arias

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EDUCATION

The University of Arizona

Bachelor of Science in Electrical and Computer Engineering, Minor in Mathematics

Aug. 2019 – May 2023

Tucson, AZ

EXPERIENCE

Computer Reliability Engineer

Microchip Technology Inc.

Jun. 2023 – Present

Chandler, AZ

- Developed a Python based automation script to parse and calculate MTBFIT data from quarterly Reliability Monitoring Reports reducing manual report creation time from 2 weeks to 10 minutes. Featuring: Directory file selection, Precise data separation and requisition, Streamlined JSON conversion for efficient storage, and Automatic file creation timestamping.
- Operated and managed advanced burn-in systems: ELES smART, ELES TTS1, ELES MTx, MCC-LC2, and AEHR Max2/Max3 ovens, achieving a 15% decrease in failures during product testings over 1 year.
- Created an AEHR to MCC-LC2 Python based burn-in program conversion script improving workflow efficiency, decreasing time between tests, and increasing cross-platform compatibility between burn-in systems.
- Researched, submitted, and presented 30+ Burn-In Specification reports and solely released 10+ Product and Package Qualification reports for Microchip's two most profitable and important business units: Data Center Solutions (DCS) and Communications Business Unit (CBU).

Software Engineering Intern

IBM Corporation

May 2021 – May 2023

Tucson, AZ

- Assisted in development of a diagnostic health evaluation bash script deployed to over 4,000 XIV/A9000/R flash storage systems to identify potential failing BBU power supplies.
- Implemented the bash script over remote connection with customers negating the need for over 10,000 physical BBU power supplies replacements for over 600 companies worldwide, saving critical information from being lost and preventing millions of dollars in down time from occurring.
- Diagnosed technical issues and supported clients in resolving issues related to XIV/A9000/R flash storage servers.

I.T. Support Volunteer and Guide

Arizona Museum of Natural History

Summers 2019 - 2023

Mesa, AZ

- Upgraded legacy computers with new hardware and upgraded software to Office 365 for enhanced efficiency.
- Conducted I.T. training to educate volunteers on new applicable software like Zoom, Teams, and Office 365 suite.
- Implemented and managed the technology infrastructure for virtual tours, webinars, and online educational programs using Zoom and WebEx.
- Set up automated systems for inventory management and scheduling using Microsoft Power Automate.

PROJECTS

Let's Boil a Computer, Again! - Hardware and Software Team Lead

Senior Design Capstone @ The University of Arizona for Microsoft Corporation

Aug. 2022 – May 2023

Tucson, AZ

- Prototyped and constructed a Two-Phase Immersion Cooling server for Microsoft using FC-72 Fluorinert.
- Designed and coded a Graphical User Interface using Tkinter in Python for system and sensor control.
- Implemented and integrated a multi-threaded dynamically updating dual-axis graph using Matplotlib onto the Python GUI from realtime C++ embedded sensor data.
- Directed total system design total system wiring, and total system construction by researching best practices and documenting all decisions made into a public Codex repository available for view.
- Received Best Design, Project, and Presentation popular vote during Craig M. Berge Senior Capstone Design Day.

RELEVANT COURSEWORK AND TECHNICAL SKILLS

Courses: Computer Architecture and Design I & II, Advanced Object Oriented Software I & II, Microprocessor Organization, Computational Techniques, Systems Engineer Process, Semiconductor Processing, Digital VLSI Design
Languages: Python, C/C++, Java, JavaScript, HTML/CSS, R, MatLab
Developer Tools: Git, Github, VSCode, PyCharm, Eclipse, Altium, LaTeX
Libraries: Pandas, NumPy, Matplotlib, Tkinter, Plotly, OpenCV, Beautiful Soup