Jesus Arias

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Education

The University of Arizona Aug. 2019 – May 2023
Bachelor of Science in Electrical and Computer Engineering, Minor in Mathematics *Tucson, AZ*

Experience

Software & Reliability Engineer Jun. 2023 – Present
Microchip Technology Inc. *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.
- Implemented a version controlled, check-out enabled, access controled file storage system for burn-in programs and oven patterns using Microsoft Sharepoint and Power Automate. Migrated all the data from vulnerable network drives to a secure and user restricted document library never used before by my department
- 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 May 2021 – May 2023
IBM Corporation *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 negating the need for over 10,000 replacement for over 600 companies.
- Diagnosed technical issueswwww and supported clients in resolving issues related to XIV/A9000/R flash storage servers.

I.T. Support Volunteer and Guide Summers 2019 – 2023
Arizona Museum of Natural History *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 infastructure 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 Aug. 2022 – May 2023
Senior Design Capstone @ The University of Arizona for Microsoft Corporation *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, Microsoft Power Automate & Sharepoint