Jesus Arias

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EDUCATION

The University of Arizona **Tucson, AZ**
Bachelor of Science in Electrical and Computer Engineering, minor in Applied Mathematics *2023*
GPA: 3.53

PROFESSIONAL EXPERIENCE

Microchip Technology **Chandler, AZ**
Software and Device Reliability Engineer *May 2023 - Present*

- Developed a python automated parsing script for quarterly marketing communication yield results presented to customers, eliminating manual calculation precedent and reducing creation time from 2 weeks to 10 minutes.
- Supplemented automated parsing script with intuitive user interface in C++ for manipulating presentable data.
- Designed and implemented a file storage system to migrate burn-in specifications and programs to a SharePoint global database, streamlining collaboration and improving efficiency across multiple MCHP locations.
- Lead a team of three in the development and implementation of high quality and temperature resistant 3D printing capabilities in the Reliability department, saving over $10K so far in outsourcing expenses.
- Designed multi-layer high pin-out breakout boards in Altium supporting ESD and Latch-up qualification tests.
- Skilled in operating advanced burn-in systems - ELES smART, TTS1, mTx, MCC LC-2 and AEHR Max ovens.
- Coordinated and lead the development of qualification burn-in boards for MCHP PIC16 and PIC8 processors.

IBM Corporation **Tucson, AZ**
Software Engineering Intern *May 2021 – May 2023*

- Contributed as a software engineer in an Agile environment, improving existing software and unit testing.
- Assisted in development and debug of a diagnostic server-health evaluation bash script pushed to 1k+ clients.
- Deployed code to over 4,000 XIV/A9000/R flash storage systems identifying potential failing BBU power supplies, negating over 10,000 potential PSU replacements for over 600 companies.
- Diagnosed technical issues and supported clients in resolving issues related to XIV/A9000/R storage servers.

PROJECTS

Dynamic H3TRB Total Solution System **Ennis, Ireland**
Microchip Chandler x Microchip Ireland *Jun. 2024 – Nov. 2024*

- Developed a dynamic H3TRB testing system using off-the-shelf modules, custom PCBs, and intuitive LabView software, leading to a 50% reduction in costs compared to traditional market present solutions.
- Collaborated with MCHP Ireland lab to learn and build a dynamic H3TRB test setup, then applied that knowledge to recreate and improve power module qualifications in MCHP Chandler and MCHP San Jose.
- Integrated high voltage, humidity, and temperature control for real-life simulation of semiconductor conditions.

Two-Phase Immersion Data Center Server Cooling System **Tucson, AZ**
Microsoft Corporation – Senior Design Capstone *Aug. 2023 – May 2023*

- Led a team of 4 in the design and construction of a proof-of-concept cooling system for data center servers, resulting in a functional prototype that exceeded thermal efficiency expectations by 26%."
- Conducted an in-depth study on the thermal efficiency of FC-72 Fluorinert, analyzing its response to variables such as pressure, temperature, and flow rate to optimize performance under varying operational conditions.
- Implemented and integrated a multi-threaded dynamically updating dual-axis graph using C++ and Python.
- Created and published a comprehensive paper detailing our software, hardware, research, and methodologies.

SKILLS

Technical Proficiencies: Python, C/C++, CAD, Altium, Java, JavaScript, HTML/CSS, React, R, SQL, MatLab, Git, LaTeX, Microsoft Power Automate, Circuit Design, LabView