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*
Courses: Computer Architecture and Design I & II, Advanced Object Oriented Software I & II, Data Structures & Algorithms, Embedded Systems Design, Microprocessor Organization, Computational Techniques, Circuit Analysis, Systems Engineering Process, Semiconductor Processing, Digital VLSI Design, Computer Networking

EXPERIENCE

Software & Reliability Engineer I   Jun. 2023 – Present
Microchip Technology Inc.   *Chandler, AZ*
- Developed a Python script automating MTBFIT data parsing, reducing creation time from 2 weeks to 10 minutes.
- Implemented a file storage system migrating burn-in recipes to a document library used by all MCHP sites.
- Directed the development and implementation of 3D printing capabilities in the Reliability department.
- Supported Reliability sub-departments in modeling and printing high-temperature withstanding test items.
- Designed multi-layer high pin-out breakout boards in Altium supporting ESD qualification testing.
- Operated advanced Burn-In systems achieving a 15% decrease in handling failures during qualification.
  - ELES smART, ELES TTS1, ELES MTx, MCC-LC2, and AEHR Max2/Max3 ovens.
- Created a Python script converting AEHR Burn-In programs to MCC-LC2 Burn-In programs.
- Researched, submitted, and presented 30+ Burn-In Specification reports to engineers and customers.
- Released 10+ Product and Package Qualification reports for DCS, CBU, MPD, MCU08 and MCU16.

Software Engineering Intern   May 2021 – May 2023
IBM Corporation   *Tucson, AZ*
- Assisted in development of a diagnostic server-health evaluation bash script.
- Deployed code to over 4,000 XIV/A9000/R flash storage systems identifying potential failing BBU power supplies.
  - Negated over 10,000 potential replacements for over 600 companies.
- Contributed as a software engineer in an Agile environment, improving existing software and unit testing.
- Diagnosed technical issues and supported clients in resolving issues related to XIV/A9000/R storage servers.

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 using an Arduino
- Received Best Design, Project, and Presentation popular vote during Craig M. Berge Senior Capstone Design Day.

CatDash - Campus Food Delivery Service Interface   Aug. 2022 – May 2023
- Prototyped and constructed a Two-Phase Immersion Cooling server for Microsoft using FC-72 Fluorinert.
- Received Best Design, Project, and Presentation popular vote during Craig M. Berge Senior Capstone Design Day.
- Received Best Design, Project, and Presentation popular vote during Craig M. Berge Senior Capstone Design Day.

Sun Tran Tracker - Tucson Streetcar Tracking   Aug. 2022 – May 2023
- Followed the system design process and principles to create a procedural and attainable high-level overview.
- Authored a comprehensive report detailing system objectives, stakeholder needs, and use cases.
- Developed functional block diagrams and verification matrices supporting system implementation and validation.

Let's Boil a Computer, Again! - Hardware and Software Team Lead   Aug. 2022 – May 2023
- Prototyped and constructed a Two-Phase Immersion Cooling server for Microsoft using FC-72 Fluorinert.
- Received Best Design, Project, and Presentation popular vote during Craig M. Berge Senior Capstone Design Day.

TECHNICAL SKILLS

Skills: Python, C/C++, Java, JavaScript, HTML/CSS, React, R, MatLab, Git, Github, Altium, LaTeX, Microsoft Power Automate, Circuit Design, Soldering, Micro-Soldering, PCB Design