Billy Sudirdja

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EXPERIENCE

Certified Repair Technician

uBreakiFix by Asurion **September 2023 - Present, Cerritos CA**

- Improved device availability and uptime by diagnosing and troubleshooting 30 devices daily, similar to monitoring key performance indicators for system health and uptime.
- Calibrated device firmware using tools like Samsung GSPN, Google GDFP, and Apple AST-2, ensuring security compliance and functionality similar to system monitoring tools.
- Provided on-the-spot incident management, similar to handling on and off-hour incident escalations in a fast-paced environment.

Intern

SLAC National Accelerator Laboratory **June 2019 - August 2019, Portola Valley, CA**

- Improved automation speed by 10% by developing scripts using Java and Python algorithms to optimize mechanical instrumentation correlating to automating system deployment and maintenance in middleware environments.
- Distributed particle accelerator distributions to a network of 50 programmable logic controllers (PLC).
- Improved safety monitoring by creating blueprints and installing oxygen deficiency monitors (ODM), similar to configuring monitoring tools and ensuring system safety and compliance.

PROJECTS

Agile Development Project

- Successfully developed a web application using JavaScript, CSS, HTML, and ElectronJS in an Agile environment, ensuring seamless user experience and responsiveness directly related to monitoring application performance.
- Enhanced collaboration and continuous integration by working with a team of 10 people, establishing a CI/CD pipeline, and incorporating tools like Git and GitHub for version control, similar to automation and scripting in SRE tasks.
- Improved code documentation and clarity for 60 functions by automating documentation using JSDocs and manually correcting grammatical errors.

Huffman Compression/Decompression Tool

- Achieved a 70% decrease in file size by designing and programming a Huffman compression and decompression tool using C++, constructing a Huffman tree with bit-wise buffer and tree serialization.
- Reduced runtime by 10% by utilizing GNU Profiler (gprof) to optimize and profile the Huffman compression and decompression tool.
- Improved error detection and handling mechanisms, enhancing tool reliability and reducing data corruption incidents by 15%.

SHA-256 and Blockchain Project

- Improved hashing algorithm performance by 25% in the SHA-256 and Blockchain Project by optimizing word expansion, buffer initialization, and parallel processing.
- Ensured robust verification and validation in the SHA-256 and Blockchain Project by automating testing using Quartus and performing verification and validation using ModelSim, applying principles of frontend development.
- Balanced area and speed for efficient blockchaining in the SHA-256 and Blockchain Project by repurposing SHA-256 algorithm to find nonce values and create an irreversible blockchain, utilizing caching techniques.

EDUCATION

Bachelor of Science, Major in Computer Engineering

University of California San Diego

Associate for Transfer, Major in Physics, and Mathematics

Skyline College

SKILLS

Programming Languages: C, C++, Java, Python, JavaScript

Software Development: Object-Oriented Programming, Full-Stack Development, Agile

Version Control: Git, Github