Rishav Dokania

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Education

Texas A&M University College Station, TX
*Master of Science in Computer Engineering - **GPA: 4/4*** *Aug. 2022 – Dec 2023*
- **Courses:** Operating System, Software Engineering, Distributed Systems & Cloud, AI Robotics, Wireless Network

Delhi Technological University New Delhi, India
Bachelor of Technology in Electrical and Electronics Engineering - GPA 8.88/10 *Aug. 2015 – May 2019*

Technical Skills

Area of Expertise: Full Stack Development, OOP, Design Pattern, Linux, Data Structure, OS, TCP/IP, IC
Languages: Java, JavaFX, C, C++, Python, Linux Bash, JavaScript, HTML, Groovy
Developer Tools: Gradle, Git, GitHub Actions, Jenkins, MySQL, AWS, MVC - Ruby on Rails, NodeJS, Jira, Docker

Experience

Cirrus Logic May 2023 – Aug 2023
Software Development Intern | Front End, JavaFX, Gradle, Jenkins, Git, Design Pattern *Austin, TX*
- Designed re-usable JavaFX Interactive Panels across 5 product family using Design Pattern with team of 5.
- Built version catalog using Gradle to configure and build complex code with single file down from 8 files.
- Reviewed code with peers used git to organize commits, pull requests and Jira work flow.

Texas Instruments July 2019 – July 2022
Software/Product Engineer | Object-Oriented Design, Python, Linux, Scripting, OpenCV *Bangalore, India*
- Lead object oriented tool development to test, simulate Quality of Integrated Circuits. Impact of 1 year, $100M+ business. 3rd highest contributor of Patent Disclosure among 8.
- Automated 150+ test setup generation of Verilog code using python scripts cut down 2 weeks/project in a 2 months testing cycle, across 15+ projects. Created test plan, schedule, bug reports, 300+ test bench in Linux.
- Improved software design, analyzed failures of Integrated Circuits across functions using 5-Why, 8D techniques to identify root cause and document Lessons Learnt. Improved 25M+ chips/year.

Academic & Projects

Software Architect | *Design Patterns, Multi-threading, Code Refactor, Robotics - ROS* Jan 2023 – May 2023
- Designed Hybrid Deliberative Reactive Software Architecture to decouple Perception, Cartographer & Behaviors of Survivor Buddy Rescue Robot. Refactored 1000+ lines of monolithic code into Modular & Extensible.
- Implemented Observer & Strategy Pattern for multi-robot Dance, Face Mirroring & Hand Gesture Interaction.
- Designed multi-threading algorithm for parallel image & audio processing. Reduced latency by 95% to below 0.1s

Linux Kernel Development | *C, C++, Multi-Threading, Linux, Elixir* August 2022 – Dec 2022
- Designed multi threaded Priority Scheduler. Used waiting queue and context switching to save current thread's x64 registers, stack pointers and switch to target thread for 4x parallel run.
- Developed new system calls, modified task struct - Process Control Block to record system call trace.

Web Developer & Product Owner | *Ruby On Rails, Docker, Git, PostgreSQL, AWS* August 2022 – Dec 2022
- Developed MVC based website for Aggie Rotaract club with 1000+ members on Ruby On Rails, PostgreSQL.
- Deployed Agile, Test Driven, CI/CD methods using GitHub Actions and AWS EC2 with Jira tracking..
- Meet Customers and created 30+ user stories, Exceeded customer expectations with 100% UAT coverage.

Achievements

1. Patent Disclosure: Software to Simulate and Visualize all Datasheet Parameters Over the Lifetime of the Product.
2. Texas Instruments Global Recognition Award - 4 times : Diagnosed Fabrication Defect, Qualify Product to secure AWS $100M+ business, Improved Qual Board Design, Released LM74700DDF in record 3.5 months.
3. Publications - 3 Papers: Poster Presentation on EOS induced failure (April 2022); Qualification HW Design for contamination issue (Nov. 2022); Co-author, Robotic Handler for Qualification Test Automation (April 2020).