

SUDARSHAN H V

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Professional Work Experience

Software Developer (SDE-2), SkyHigh Security

[September 2025 - Present]

- **Key Skills:** C++, ARM-based Processors, Client Proxy, ZTNA.
- Engineering the porting of the SkyHigh Client Proxy to ARM-based processors, ensuring continued product compatibility and protecting 2 million USD in ARR.

Senior Associate Software Developer (SDE-2), MathWorks

[January 2025 - September 2025]

Infrastructure Process Improvements

- **Key Skills:** Java, Golang, C++, multithreading, concurrency.
- Improved coverage collection time by 50% using a worker thread pool (Golang) and multithreading(C++). Applied design patterns (Singleton, Factory, Observer) to enhance coverage workflows, reducing infrastructure failures by 20%.
- Led Agile collaboration across US and UK teams to align goals and timelines. Onboarded 30+ hardware devices (e.g., Bluetooth, BLE, STM32, TIC2000) across 10 teams into a scheduling infrastructure, boosting test scalability.
- Leveraged Java collections, C++ STL classes, and templates to enable multiport operations in both Windows and Linux environments. This improved port usage efficiency by around 30%, as dual hardware board sets like Renesas could use a single port.

Associate Software Developer (SDE-1), MathWorks

[April 2023 - December 2024]

Automatic Leasing of Hardware Resources over Network

- **Key Skills:** Java, MATLAB, VirtualHere, REST APIs, HTTPS, TCP, SDLC, Wireshark
- Developed an automatic leasing mechanism for USB, Ethernet, and Bluetooth hardware over network for 15+ teams, using USB-over-TCP/IP technologies like VirtualHere and myUTN.
- Spearheaded the complete software development lifecycle (SDLC) for network hardware resource leasing, from requirements gathering to deployment and maintenance, reducing dropped tests by 30% for 15 hardware teams.

Test Selection Infrastructure Enhancements

- **Key Skills:** Perl, Golang, REST, gRPC, protobuf, Maven, Git Version Control, Test Driven Development
- Architected a gRPC-based Perl to Golang solution with an emphasis on gRPC-based microservices to move 20% of test selection code from Perl to Golang and improve API communication times by 50%. ([Project Link](#))
- Engineered automated test selection processes across a testbed of over 200,000 tests using Golang, Perl, XML, and test data from REST APIs to reduce testing times by 25%

Associate in Engineering Development Group (EDG), MathWorks

[August 2022 - March 2023]

Simulink Code Refactoring and Support Initiatives

- Eliminated 800 compiler warnings and refactored the Simulink Mask C++ codebase using Object-Oriented Design (OOD) and SOLID principles, based on C++11 (and above) standards. (Skills: GDB Debugging, virtual classes, interfaces)
- Resolved complex technical inquiries from 5+ clients monthly regarding MathWorks products, achieving a 5-star satisfaction rating.

Containerization of Code Coverage Landing Page

- **Key Skills:** Docker, Docker-Compose, Nginx, GitHub Actions, CI/CD, SonarQube, C++
- Containerized a MEAN application with over 3000 active users. Standardized DevOps staging and production workflows, and deployed the container using limited resources to manage user traffic.
- Developed a SonarQube and GitHub Actions pipeline to capture CPP coverage with a 75% threshold for line coverage.

Relevant Projects

IRS Assisted Interference Management for 6G Networks

[May 2021 - April 2022]

- Designed 3-channel models for distributed IRS systems, which have the potential to model interference cancellation. The models have been analyzed for the 2-user Gaussian interference channel in 6G wireless networks.

Education and Certifications

- B.Tech in Electrical Engineering, IIT (Indian Institute of Technology) Tirupati; Graduated in 2022 with 9.07 CGPA
- Relevant Courses: Data Structures & Algorithms, Networking, Operating Systems, Machine Learning (Stanford Online)
- Head of IIT Tirupati Debate Club; led the team to victories against international universities and other IITs.