Gaurav Agarwal

(+91) 805-083-7120 | gauravagarwalgarg@gmail.com | gauravagarwalgarg | gaurav-agarwal-garg | gauravagarwalgarg

Summary

I have 8+ years of experience spanning all phases of the software development lifecycle, with a proven track record of delivering results in diverse environments which includes cutting-edge aerospace R&D labs, agile startups, and large-scale enterprises. What drives me is to deepen my expertise, embrace state-of-the-art technologies, and contribute to forward-thinking organizations by developing technology-agnostic, innovative solutions in challenging and dynamic domains.

Work Experience

Boeing India Pvt. Ltd.
Bengaluru, India
SOFTWARE ENGINEER 3 | EMBEDDED & AVIONICS SYSTEMS
Nov'19 - Present

- Designed, developed, and maintained scalable architectures, APIs, data models, and service interfaces for applications across diverse product domains. Conducted feasibility studies, created robust microservices architectures, and collaborated with cross-functional teams to ensure compliance with industry standards.
- Architected and integrated software components into fully functional systems leveraging containers, Linux-based platforms, utilizing a variety of programming languages and frameworks. Conducted in-depth requirements analysis, architectural design, and code reviews, ensuring full traceability and delivery of maintainable, high-quality software solutions.
- Developed and maintained build infrastructure, platform services, middleware frameworks, real-time communication protocols, diagnostic tools, and mission-critical application software for avionics systems, ensuring high scalability, performance optimization, fault tolerance, secure data handling, and seamless integration across flight and hardware-in-the-loop simulation environments.
- Designed and implemented automated CI/CD pipelines with GitLab CI and Docker, streamlining build, integration, and deployment processes to ensure consistent and reliable software releases.
- Configured custom hardware architectures and optimized Board Support Packages, including U-Boot, kernel, custom Yocto recipe-based root file systems, cross-compilation toolchains, and device trees, to enable efficient secure boot processes and enhance runtime performance for custom hardware platforms.

Team Indus (Axiom Research Labs Pvt. Ltd.)
Bengaluru, India
FLIGHT SOFTWARE ENGINEER | INTEGRATED AVIONICS | COMMAND & DATA HANDLING
Jan.'17 - Oct'19

- Developing software systems for orbital, descent and surface phases of the soft landing lunar mission, with onboard state estimation, autonomous attitude correction, lunar terrain feature tracking, active thermal and power control, interface drivers for sensors peripherals and other interfacing cards, with limited fault detection, isolation, and recovery.
- Developed framework for Processor in Loop Simulation (PiLS) system emulating sensor and actuator electrical interfaces to lander avionics unit.

Technical Skills

Programming Languages	C, C++, Python, Java, Bash, SQL, GraphDB, MongoDB, Matlab & Simulink, LaTeX
Platform Software	AWS (EC2, S3, Lambda), Nginx, Docker, Kubernetes, Load Balancers, Kafka, Yocto
DevOps & Tools	Git, GitLab CI/CD, Jenkins, Vagrant, Doxygen, CVE, Polyspace, Postman
Communication Protocols	UART, SPI, I2C, CAN, ARINC, ADC, HTTP/HTTPS, REST APIs, TCP/IP, MQTT, FTP
Operating Systems	RTOS (DEOS, VxWorks, FreeRTOS), Linux (Ubuntu, CentOS, Yocto, Buildroot), Windows

Education

P.E.S Institute of Technology, Autonomous Institute under VTU, Belgaum
Bengaluru, India
B.E IN ELECTRICAL AND ELECTRONICS ENGINEERING
Aug.'13 - May'17

- GPA: 8.93/10.00

Kerala Samajam Model School
Jamshedpur, India
I.C.S.E, I.S.C IN PURE SCIENCE WITH COMPUTER APPLICATION
Mar'99 - May'13

- ICSE: 93.4%, ISC: 88.75%