Gaurav Agarwal

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Summary

Software Engineer with around 5+ years of experience, having interest in hands-on development, end-to-end system design, and software architecture with a base in embedded systems, data structures, and algorithms, strong aptitude in problem-solving, and exposure to handling complete ownership of components and driving projects independently. Looking forward to expanding my domain and working on state-of-the-art technologies while contributing to the growth of a dynamic and progressive organization.

Work Experience

Boeing India Pvt. Ltd.

Bengaluru, India

Software Engineer | Embedded & Avionics Systems — *Nov'19 - Present*

- Develops, maintains code, and integrates software components into a fully functional real-time platform software for common core systems.
- Develop frameworks, driver functions, libraries, the interface for chosen Platform OS (VxWorks, DEOS and Bare Linux).
- Involves in entire software life-cycle i.e software architecture, design, and documentation for modular features.
- Establish traceability for requirements to software code and assists with test procedures, test cases as per avionics standards i.e. DO-178C.
- Gathers information to support software project management by collecting metrics, identifying risk and oppurtunies, maintaining process documents & tools.

Team Indus (Axiom Research Labs Pvt. Ltd.)

Bengaluru, India

Team Indus Skywalker, Flight Software | Integrated Avionics | Command & Data Handling — *Jul.'17 - Oct'19,* ***Intern****: Jan.'17 - Jun.'17*

- Design and Development of an on-board flight software system for a soft landing lunar mission.
- Design, develop, and/or modify engineering applications for specialized capabilities within spacecraft i.e sensor, control algorithms, processor in-loop simulations, and mission management systems
- Feasibility studies with present architecture and design, code reviews with standards, providing solutions for each module development, and final independent verification and validation.
- Developing frameworks for regression, unit, interface and integration level of testing which involves sensor and other interface cards emulation and simulation
- Developed framework for **Processor in Loop Simulation (PiLS)** system emulating sensor and actuator electrical interfaces to lander avionics unit. Responsible for regular comprehensive PiLS exercises of the lunar lander avionics system.

Technical Skills

Programming	C, C++, Python, Bash, Matlab & Simulink, Java and LaTeX
DevOps	Atlassian Tools, Jenkins, Docker, Gitlab, Doxygen, LCov, and Polyspace
Microcontroller Architecture	ARM, SPARC and AVR
Protocols	UART, SPI, I2C, ARINC, ADC, PWM, HTTP, TCP, FTP
Operating Systems	RTOS (DEOS, VxWorks), Linux (Ubuntu, CentOS, Linaro, 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%

Academic Projects

Student Team Lead

Bengaluru, India

PISAT- a nano-satellite project executed by P. E. S. University launched aboard **PSLV C-35** on 26th Sept'16 — *Oct.'14 - Dec.'16*

- Involved in complete design, development, assembly, integration, and testing phase of PISAT- a nano-satellite student project funded by ISRO and PES University. Worked in following subsystems under the expertise of ex-ISRO scientists
- Develop real-time software for an imaging satellite in a component base manner which managed overall functionality such as attitude determination, control systems, telemetry, and tele-command (RTE)