

Adarsh Srivastav

Embedded Systems Engineer III

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PROFILE

Embedded systems engineer with 3+ years of experience across embedded firmware, motor control, battery systems, power electronics, embedded RF, board bring-up, and mixed-signal debugging. Progressed through three engineering levels at WCB Robotics and now provide technical guidance while continuing system integration and validation work.

EXPERIENCE

Embedded Systems Engineer III

Jul 2026 - Present

WCB Robotics India Pvt Ltd

- Continue the battery-management program with focus on firmware/hardware integration, diagnostics, communication, system bring-up, and validation.
- Provide technical guidance to junior engineers during embedded implementation, integration, testing, debugging, and issue resolution.

Embedded Systems Engineer II

Jul 2024 - Jun 2026

WCB Robotics India Pvt Ltd

- Initiated battery-management development and owned integration across monitoring, communication, diagnostics, configurable safety behavior, and validation.
- Developed sensorless BLDC firmware spanning real-time PWM, synchronized sampling, commutation, current regulation, sensing, and power-stage integration.
- Architected point-to-multipoint 2.4 GHz embedded communication with packet integrity, acknowledgements, retry behavior, bring-up, and field validation.
- Worked across mixed-signal bring-up and EMI/EMC investigation involving firmware, motor, power, RF, and sensing subsystems.

Embedded Systems Engineer I

Jul 2023 - Jun 2024

WCB Robotics India Pvt Ltd

- Developed and debugged PWM, ADC, UART, I2C, PMBus, and SPI drivers on 32-bit microcontrollers.
- Integrated sensing modules, LED drivers, power-conversion functions, console interfaces, Hall-sensor BLDC control, and battery-powered embedded systems.
- Reviewed schematics and PCB layouts for manufacturability, signal integrity, and integration risk.

Software Engineer Intern

Jun 2022 - Jul 2022

Persistent Systems

- Built an AWS IoT-enabled serverless application using HTML, CSS, JavaScript, S3, API Gateway, Lambda, and DynamoDB.
- Recreated the working cloud infrastructure with Terraform infrastructure as code.

EDUCATION

B.Tech. and M.Tech. in Electrical Engineering
Indian Institute of Technology (BHU) | 2018 - 2023

WORK-BACKED CAPABILITIES

Firmware

Embedded C, real-time programming, low-level drivers, interrupts, PWM/ePWM, ADC, UART, I2C, PMBus, SPI

Physical systems

BLDC motor control, battery-management integration, power conversion, current sensing, gate-drive integration

Bring-up and validation

Hardware-software integration, diagnostics, oscilloscopes, logic analyzers, spectrum analysis, PCB review, EMI/EMC

Connected systems

Embedded 2.4 GHz RF, packet reliability, AWS IoT, serverless architecture, Terraform

SELECTED ENGINEERING WORK

ENERGY

Battery-management integration

Firmware/hardware integration across monitoring, communication, diagnostics, configurable safety behavior, bring-up, and validation.

MOTION

Real-time BLDC motor control

Hall-sensor and sensorless work spanning timing, sampling, commutation, regulation, sensing, gate drive, and mixed-signal validation.

LINK

Reliable embedded RF

Point-to-multipoint communication with packet integrity, acknowledgement, retry behavior, interface integration, and field observation.

FOUNDATION

Drivers and mixed-signal bring-up

Peripheral drivers, board interfaces, sensing, power, PCB review, and cross-domain issue investigation using instrument evidence.

CLOUD

AWS IoT and Terraform

Internship work connecting a browser client, serverless API, application data, device communication, and reproducible infrastructure.

PRACTICE EVIDENCE

Defensive 32-bit C systems toolkit - in-progress personal C17 practice containing six bit/field helpers and two population-count methods. The project ledger records 61 checks across success, boundary, null, invalid-range, field-fit, and unchanged-on-failure behavior, with a strict-warning GCC build.