

Harjit Kaur

Embedded Software Engineer

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Professional Summary

Embedded Software Engineer with 4+ years of experience in developing and troubleshooting firmware for ARM and other microcontrollers. Skilled in integration testing, debugging, and delivering sector-specific solutions in electronics, agriculture, and railway systems. Proficient in embedded C, communication protocols, and hardware interfacing.

Technical Skills

- Programming: Embedded C, Arduino, 8051, Renesas, STM32 & Nuvoton
- Communication Protocols: SPI, CAN, I2C, UART
- Modules: GPS, GNSS, Sensors, RF, TFT, OLED, Graphic Displays
- Tools: Keil, STM32 IDE, E2 Studio, HEW, MPLAB & Micro-C, STVD & STVP
- Project Management & Technical Documentation
- Microsoft Office Suite (Word, Excel, PowerPoint)
- Debugging Tools: JTAG, SWD, Logic Analyzers, Oscilloscopes
- Embedded Linux Basics

Work Experience

- R&D Engineer – T&D Electronics System.
- Oct 2020 – Present
 - Designed and programmed embedded systems for agriculture, railway, and industrial applications
- Performed firmware debugging, system testing, and hardware integration
- Created detailed technical documentation and project reports
- Computer Operator – Steel Wire Manufacturing Industry
 - June 2020 – Oct 2020
- Handled data entry, records management, and operational software tools

Key Projects

- Laser Land Leveller for Agriculture

- GNSS-GPS based Land Leveller
- Knitting Machine Controller
- Automatic Street Light System
- GPS Tracker
- Railway Pump Controller

Education

B.Tech in Electronics & Communication Engineering – Gulzar Group of Institutes, PTU (2020) – 75%

Intermediate (Non-Medical) – Ramgarhia Girls Sr. Sec. School, PSEB (2016) – 80.5%

Matriculation – Ramgarhia Co-Ed High School, PSEB (2014) – 71.2%

Professional Trainings

- Telecommunications Training – Tecnomatics Solutions
- Networking Training – Tecnomatics Solutions
- Embedded Programming – Sigma Industrial Controls
- Automation PLC Training (6 months) – STEP-GNDEC
- Embedded Programming (3 months) – T&D Electronics System

Awards and Achievements

- Participated in World's Student Day Project Competition (2016) – GGI
- Coordinator in Robomania Sumobot (2018) – GGI Campus
- Participant in Robomania Mud Rally (2018) – GGI Campus
- Member of Robomania Reach Out Team (2019) – GGI Campus