

PINJARI KHADAR BASHA

Embedded Software Engineer

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PROFESSIONAL SUMMARY

Software Engineer Intern at HARMAN International experienced in developing automotive IOC software using AUTOSAR, C, and multi-protocol communication. Skilled in AUTOSAR layers, diagnostics, system integration, real-time software, and safety-critical automotive applications.

TECHNICAL SKILLS

Languages : C, Embedded C, Data Structures, C++, Python
Protocols : CAN, UART, SPI, I2C
RTOS / OS : FreeRTOS, Embedded Linux
Controllers : ARM7 LPC2129, Renesas RH850 F1KM-S2, Samsung EAx20, Qualcomm 7255
AUTOSAR : MCAL, ECU Abstraction, Services, COM, Diagnostics, RTE, OS
Tools : DaVinci Developer, DaVinci Configurator, PCAN, Visual Studio, Enterprise Architect, Git, GitHub
Lauterbach Debugger

EXPERIENCE

Embedded Software Engineer Intern – HARMAN International, Bangalore May 2026 – Present

- Currently developing IOC software for automotive systems, enabling communication between the main SoC and vehicle components such as displays, cameras, and audio systems.
- Working with AUTOSAR layers to develop reliable communication and diagnostic functions.

Professional Trainee – Vector India, Bangalore Aug 2025 – Apr 2026

- Completed embedded systems training and developed an automotive ECU communication project using CAN.
- Gained practical experience in Embedded C, C++, Python, ARM architecture, and object-oriented programming

PROJECTS

Ready Upgrade Domain Controller 2.0

- Ready Upgrade Domain Controller 2.0 is an automotive central control platform that connects and manages vehicle displays, cameras, audio systems, Ethernet, USB, and other vehicle components.
- It handles data exchange, device control, diagnostics, boot-up, power management, and safety communication between the vehicle systems, Samsung EAx20 SoC, Linux, Android, and Safety Island.
- The platform uses the RH850 F1KM-S2-based IOC with AUTOSAR software layers, drivers, IPC mechanisms, and diagnostic services to provide reliable real-time system operation.

Advanced Ultrasonic Proximity Detection & Reverse Parking System

- Developed a CAN-based reverse parking assist system using ARM7 LPC2129 and ultrasonic sensors.
- Configured GPIOs, timers, and interrupts for accurate ultrasonic distance measurement and obstacle detection.

Student Information Management System

- Developed a student record management application to efficiently store and organize student information. Used dynamic memory allocation for flexible data handling and implemented features such as adding, deleting, updating, searching, sorting, and saving records to files.

EDUCATION

B. Tech Electronics & Communication Engineering — RGM CET, Nandyala	CGPA : 7.7 2021 – 2025
Class XII (MPC) — Aksara Sree Junior College, Adoni (BIEAP)	CGPA : 7.4 2021
Class X (SSC) — YMK High School, Adoni (BSEAP)	CGPA : 8.2 2019

CERTIFICATIONS

Embedded Systems Training — Vector India Pvt. Ltd.
Embedded System Developer Virtual Internship — AICTE
Introduction to Internet of Things — NPTEL