

Akshay Dhenge

3827 Barrington Cir, Saginaw, MI
akshaydhenge.uk

Email: akshay.dhenge@gmail.com

Mobile: (980) 267-8208

OBJECTIVE

Seeking a position in the Automotive Embedded Industry in which I can utilize and build upon my current knowledge of modern Embedded Manufacturing and Design Engineering.

SUMMARY

- 9+ years of Automotive Embedded Engineering experience across all stages of V-cycle product development.
- Familiar with ASPICE development process; strong project management and cross-functional team leadership.
- Experienced with CAN, LIN, MOST, SPI, I2C, Bluetooth and other communication protocols.
- Strong understanding of on-board diagnostics and automotive infotainment: Navigation, Audio, Speech, HMI, Network Services, Media.
- Proficient in C/C++, Python; experienced with Linux, QNX, and AUTOSAR-based projects.

EXPERIENCE

Halla Mechatronics

Embedded Software Engineer

Auburn, MI

Jan 2021 – Present

- **AUTOSAR Development** Developed and integrated AUTOSAR BSW components including COM and UDS (ISO 14229) diagnostic services using EB Tresos, targeting Electromagnetic Brake and Electronic Power Steering (EPS) ECU platforms.
- **CDD & OS Configuration** Authored AUTOSAR Complex Device Driver (CDD) components and configured OS tasks for multi-domain ECU environments, ensuring deterministic real-time behavior.
- **UDS Diagnostics** Implemented UDS diagnostic service handlers within the AUTOSAR DCM/DEM stack, enabling OBD fault code management and field diagnostics for brake and steering systems.
- **Model-Based Development** Integrated MATLAB/Simulink model-based software components into the AUTOSAR RTE, bridging MIL and SIL validation phases for EPS control algorithms.
- **Vector Toolchain** Leveraged CANdela for diagnostic database authoring; used CANoe, CANalyzer, and CANape for CAN communication validation, calibration, and ECU bring-up testing.
- *Tools: EB Tresos, CANdela, CANoe, CANalyzer, CANape, MATLAB/Simulink, winIDEA*

Visteon Corporation

Embedded Software Engineer

Van Buren Charter Twp, MI

Oct 2019 – Dec 2020

- **ECU Diagnostics** Developed and validated UDS diagnostic service implementations for Instrument Panel Cluster on CMUr (GM) project; managed fault code analysis via ECU core dumps and serial logs.
- **CAN/LIN Integration** Analyzed and debugged CAN, LIN communication issues using Vector toolchain; performed ECU calibration and signal validation during software integration phases.
- **Software Debugging** Debugged customer-reported defects using Lauterbach Trace32 and Code Composer Studio; integrated BSW libraries into test builds and validated fixes against system requirements.
- **Test Automation** Wrote automation scripts for regression and functional testing of IPC software modules, reducing manual test effort across multiple software releases.
- *Tools: CANoe, CANalyzer, CANcaseXL, neoVI, VSpy, Lauterbach Trace32, Code Composer Studio*

Panasonic Automotive

Software Test Engineer

Farmington Hills, MI

Jan 2017 – Oct 2019

- **Test Execution** Supported VP4R SW and Validation team by writing and executing test cases from system requirements.
- **Log Collection** Reproduced customer-reported defects and collected CAN, LIN, UDP, ECU, and BT sniffer logs.
- **Automation** Wrote automation test scripts using CAPL and Python; performed ECU flashing and SW debugging with J-Tag and ATMEL debuggers.
- **Domain Coverage** Validated issues across FM/AM/SXM, Tuner, CarPlay, Android Auto, Media, and Navigation domains.
- *Tools: CANoe, NeoVI, RTC, JIRA, DNG*

Pi-Square Technologies

Embedded Software Engineer

Farmington Hills, MI

Jan 2016 – Dec 2016

- **CAN Development** Designed, implemented, and tested CAN Tx/Rx processing.
- **Diagnostics** Implemented and maintained Diagnostic DIDs, UDS, and KAM (EEPROM) section in the ECU.

- **Integration** Integrated Wi-Fi WAP SW module; reviewed and approved system requirements for software module implementation.
- *Tools: JIRA, DOORS/DNG, RTC, Polarion*

URBN Inc.

Los Angeles, CA (Remote)

Embedded RF Engineer

June 2015 – Dec 2015

- **Bluetooth Mesh** Created a Bluetooth mesh network using NRF52 ARM-based SoC controllers.
- **Sensor Integration** Developed park sensors and integrated them with mesh nodes using half-duplex time-sliced communication.
- **Product Ownership** Owned the first product iteration across its full development life cycle.

EDUCATION

University of North Carolina

Charlotte, NC

Master of Science, Computer & Electrical Engineering

GPA: 3.5

YC College of Engineering

Nagpur, India

Bachelor of Technology, Electronics Engineering

GPA: 76%

RELEVANT COURSEWORK

Data Structures & Algorithms, Parallel Computing, Embedded Systems, Computer Architecture, Real Time Operating Systems, Digital Signal Processing, Control Systems, Data Communication & Networking, Wireless Systems, Microcontrollers & Microprocessors, Digital System Design, Analog Circuits, VLSI Design

TECHNICAL SKILLS

Languages C, C++, Python

Architectures ARM, Atmel, Intel 8086 (8-bit/16-bit)

Microcontrollers TI-MSP430, Renesas RX63N, ARM, Raspberry Pi, NRF52, Photon/Electron

Protocols CAN, LIN, SPI, I2C, UART, RS232, Bluetooth, TCP/IP, Zigbee/Xbee

Parallel Programming OpenMP, MPI, CUDA

Automotive Tools CANoe, CANalyzer, Vehicle Spy, OBD connector

IDEs Eclipse, Code Composer Studio, Keil uVision, HEW, GNU Toolchain

Other Tools Visual Studio C++, MATLAB, Simulink, OrCAD, Jenkins, IBM RTC Jazz, DOORS