

Triveni

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Summary

- Around 6 years of Professional expertise in Model-Based Algorithm & Software development, Automatic code generation, embedded software development, and Microprocessor and Microcontroller interfacing.
- Proficient in Embedded C and C++ programming on multiple platforms (Windows, Linux/QNX).
- Expertise in modeling tools like Matlab/Simulink, Stateflow, and Targetlink, and with vector AUTOSAR toolchain
- Good working knowledge in standards and protocols like CAN, LIN, FlexRay, GM LAN, TTP, TCP/IP, RS232, RS422, ARINC 664, ARINC 429, AFDX, etc.
- Expertise in using CAN based tools such as CANalyzer, CANoe, CANape, etc.
- Good working experience with CANalyzer software tool and used the tool to analyze the data transmission in automotive vehicle security system projects.
- Experience in Design, implement and test modular embedded software for bit multicore microcontroller based ADAS ECU products
- Experienced in creating test environments to run automated tests and verification.
- Performed Functional, Unit and Subsystem testing.
- Experience in GNU Tools (gcc, gdb), Configuration Management Tools (ClearCase, CM Synergy) and Requirement Management Tool (DOORS).
- Have very good exposure to software development life cycle like Feasibility, Design, Coding, Testing, Implementation and Maintenance.
- Experienced in using various testing tools (dSpace, Emb Unit/CUnit, IBM RTRT) and code check standards (MISRA, CMMI).
- Passionate worker to contribute individually and as part of a team.
- Ability to learn and master new technologies with good analytical and problem-solving skills.

Technical Skills

Hardware: 8/16/32-bit Microprocessors and Microcontrollers (Texas Instruments, ARM, Freescale)
Peripheral devices (SPI, I2C, UART, RS232, RS422, CAN, ADCs, DACs, PWM),
Instrumentation (Spectrum Analyzer, Network Analyzer, Oscilloscope, Multimeter)
Programming: Matlab, Embedded C, C++, and MPLAB
Design & Simulation: Simulink/Stateflow/RTW, PSPICE, ORCAD, CANalyzer
Scripting: Python, Shell Script.
Software: MS Visual Studio, MS Office (Word, Excel, PowerPoint, Outlook).
Systems: Windows, Linux/Unix, Mac OS.
Other: Code Generation with Targetlink, IBM Rational Doors and Clearcase, dSpacesystem.

Work Experience

Volvo – Edison, NJ

Sept 11th 2019 - Present

Embedded Software Engineer

- Involved in the development of Software requirements and functional specifications for

new Advanced Driver Assistance and Chassis systems.

- Involved in the design of Advanced Driver Assistance systems using modeling tools such as Matlab, Simulink/Stateflow/RTW.
- Provided support for Software Integration, development and Release management.
- Developed software in C following MISRA C/C++ coding guidelines.
- Creating the algorithm Software requirements engineering for the (ADAS)
- Validation of ECU (Electronic Control Unit) Navigation Systems Radio head units as well as other devices.
- Involved in developing software interfacing modules for automotive communication protocols such as CAN, LIN and FlexRay.
- Developed Autosar application layer software components using embedded c.
- Created Autosar architecture files using DSPACE system desk tool
- Verification & Validation testing for the new IPC, VRM hardware releases.
- Involved in every step of SDLC process like requirement analysis, designing, coding, testing, releasing and providing product maintenance, and documentation at each stage.
- performed model in loop (MIL), Hardware in loop (HIL) and Software in loop (SIL) simulations.
- Performed system-level integration of the software.
- Gained experience in advanced features like ACC, LDW/LKW, RCTA, etc.

Environment: ADAS systems, CAN, LIN, MATLAB/SIMULINK, AUTOSAR, MISRA standards.

Alten – Troy, MI

Jan 8th 2018 - Aug 30th 2019

Embedded Firmware Engineer

- Involved in product specifications development for Vehicle In-Vehicle- Infotainment system, Remote Keyless Entry, Start-Stop Button and Steering Wheel Control Switches.
- Hand-coded algorithms using C programming language.
- Involved in developing software interfacing modules for automotive communication protocols (CAN).
- CAN Driver integration and maintenance.
- Validate With Bluetooth devices, Navigation Systems, Radio Head Units well as other devices
- Tested on bench for issues from the system log coming over debug port (RS232) and simulated required ECU's with CANoe.
- Involved in auto code generation by using target link software
- Developed VTTI Automated Vehicle platform using machine vision for Lane Tracking, GPS path following, Throttle/Brake/Steering control over CAN, Radar and V2V technologies for object detection
- Develop software/Firmware modules to implement specialized functions on embedded system
- Software Build Integration, Maintenance and Release.
- Conduct Validation tests of new or existing test cases, equipment, or software in accordance with internal protocols or end client standards.
- Tracked and maintained requirements traceability matrix using DOORS to ensure all system level requirements given by the customer are met during release.

Environment: C ,Python, CAN, SDLC, DOORS

Volvo, India
Embedded Software Engineer

Jan 5th 2015 - Dec 30th 2016

- Designed and remodeled various Powertrain features using simulation and model based design methods such as Matlab/Simulink/State Flow.
- Gained experience in V-model software development and documentation.
- Conduct data capture, data analysis for both auto-coded and non-auto-coded C code using RTTRT, INCA etc.
- Execution of test vectors for the given Module and give a root cause analysis if there is any deviation between code and Model. If there is a deviation then provide solution to fix the deviation needs to be given.
- Achieved expertise on Unit Testing, Functional Testing (SIL, MIL, HIL) and Regression Testing on the embedded software written for Electronic Engine Management modules which includes Application layer, Engine On-Board Diagnostics and core features (physical layer, air features, engine features).
- Gained experience in high level hardware and software debugging using oscilloscopes, logic analyzers, and simulators.
- Performed system-level integration of the software.

Environment: V model SDLC, MATLAB/SIMULINK, In-Loop mechanisms, ECU units.

Embitel, India
Embedded Software Engineer

June 2nd 2014 – Dec 2015

- Designed a PWM driver that generates static configurable pulse train of various duty cycle and frequency to keep the alarm signal module active in the automobile.
- Used LIN protocol to connect Body Control Module (BCM) and the alarm signal module.
- Designed low-level device drivers (USB device drivers/video/display/ touch device drivers), media gateway (audio filtering and media transport protocols).
- Developed firmware components on Embedded Linux environment including Kernel drivers (audio/video interfacing drivers, USB interfacing drivers, audio backend drivers for noise cancellation).
- Responsible for the development of cross-platform GUI controls using C/C++ shared between Windows and embedded targets.
- Derived interface design requirements and conducted design reviews and code reviews.

Environment: C/C++, Embedded Linux, Low-level drivers, LIN protocol, GUI interfacing.

Education: Master of science in Electrical Engineering

May 2018

Texas A&M University, Kingsville

Bachelors in Electrical and Electronics Engineering

June 2014

Visveswaraiah Technological University, India

Triveni K

- Harrisburg, PA, USA

Contact Information

- 8w5-muz-52c@mail.dice.com (Preferred)
- 5713417791 (Preferred)

Work History

Total Work Experience: 6 years

- **Embedded Software Engineer | Volvo**
Sep 01, 2019 - No End Date | Edison NJ United States
- **Embedded Software Engineer**
Jan 01, 2015 - Dec 01, 2016 | India
- **Embedded Software Engineer**
Jun 01, 2014 - Dec 01, 2015 | India

Education

- **Bachelors**, No Dates Provided | Visveswaraiah Technological University

Skills

- **c** | 6yrs | 2021
- **embedded software** | 5yrs | 2021
- **engineering** | 5yrs | 2021
- **integration** | 5yrs | 2021
- **qa** | 5yrs | 2021
- **sdic** | 5yrs | 2021
- **software** | 5yrs | 2021

- **controls** | 4yrs | 2021
- **algorithms** | 3yrs | 2021
- **automotive** | 3yrs | 2021
- **c++** | 3yrs | 2021
- **matlab** | 3yrs | 2021
- **simulation** | 3yrs | 2021
- **simulink** | 3yrs | 2021
- **hardware** | 3yrs | 2021
- **radio** | 3yrs | 2021
- **verification and validation** | 3yrs | 2021
- **debugging** | 4yrs | 2019
- **embedded systems** | 3yrs | 2019
- **firmware** | 3yrs | 2019
- **validation**

Work Preferences

- Likely to Switch: Most Likely
- Willing to Relocate: No
- Work Authorization:
 - US
- Work Documents:
 - Employment Auth Document
- Security Clearance: No
- Third Party: Yes
- Employment Type:
 - Contract - Corp-to-Corp
 - Contract to Hire - Corp-to-Corp

Profile Sources

- Dice:
<https://www.dice.com/employer/talent/profile/25fcddb78344fb875b603b5335b2a80b59e77a34>