NAGA RAVI VARMA DEVARAPALLI

Ravivarma08.devarapalli@gmail.com |+91 949-330-8249 |

CAREER OBJECTIVE:

Seeking a challenging Embedded Software Engineer position where I can leverage my expertise in embedded software development to drive innovation and provide value to the organization.

Experience:

May 2018 till present: Bosch Global Software Technologies Private Limited(BGSW) Bangalore. Working as a **Lead Software Engineer** in Embedded Software Development Domain. Currently working **CARIAD Automatic Emergency Brake Feature development.**

Professional Career Summary:

- 6+ years of experience in Automotive ADAS software design, development, and testing, with a focus on embedded systems and application engineering.
- Proficient in C++ and unit testing using the GTest framework, with strong skills in software integration, defect management, and vehicle testing.
- Experienced in tools like Lauterbach Trace32, JIRA for defect analysis, IBM DOORS for requirement management, and Jenkins for CI/CT.
- In-depth knowledge of communication protocols (Flexray, I2C, UART), ASPICE processes, and ISO 26262 standards.
- Strong understanding of ECU hardware architecture, with hands-on experience in debugging, flashing, and testing on SIL, HIL setups.
- Experienced in Test planning, Testing Execution, Defect Reporting, Defect Tracking and Test Automation.

Roles and Responsibilities:

- **Individual Contributor/Programmer**: Developed and integrated embedded software solutions.
- **Requirement Engineering & Software Design**: Analyzed and documented requirements; designed scalable software architecture.
- **Unit Testing (GTest)**: Developed unit tests to ensure code quality.
- **ADAS Feature Development**: Contributed to Automatic Parking, Parking Assist, Cross Traffic Alert, AEB, MSS, and HMI.
- **KPI & Issue Analysis**: Analyzed KPIs and resolved system issues to improve performance.
- **Vehicle Software Integration & Testing**: Led integration and testing efforts for vehicle software in Germany.
- **Hardware Setup & Procurement**: Managed hardware test environments and device procurement.
- **SIL/HIL Testing & ECU Debugging**: Conducted system testing and ECU flashing/debugging.

TECHNICAL SKILLS:

- **Programming Languages**: C, C++, Python, OOP's
- **Operating Systems**: Linux, RTOS, Windows
- **Protocols**: Flexray, I2C, UART & SPI
- **Tools**: Trace32, GIT, JIRA, DOORS, CANoe, CANape, Carmaker
- **Quality Standards**: ASPICE, MISRA, ISO 26262, QACPP Coding Guidelines
- **Testing Frameworks**: Google Test (GTest), SIL & HIL
- **Additional Skills:** Linux System Programming.

PROFESSIONAL EXPERIENCE

Lead Software Engineer

Bosch Global Software Technologies Private Limited (BGSW), Bangalore **May 2018 – Present**

WORK EXPERIENCE

Project: Automatic Emergency Brake (Oct 2024 – Present)

Client : CARIAD

Role : Lead Developer.

Environment : Visual Studio, ARM.

Tools : Trace32, GIT, SmartGit, DOORS, CANape.

Programming Language: C++

Responsibilities:

- Designed and implemented collision avoidance algorithms for the Automatic Emergency Braking (AEB) feature.
- Developed object classification algorithms to identify and prioritize obstacles relevant to collision scenarios.
- Primary point of contact for vehicle testing, coordinating with cross-functional teams.
- Analyzed issues reported by both the system testing and vehicle testing teams, identifying root causes and delivering timely resolutions.
- Conducted code reviews and systematically addressed MISRA-C rule violations, ensuring high standards of code safety and compliance in AEB algorithms.

Project: Maneuver Steering Support (DEC 2022 –Oct 2024)

Client : AUDI

Role : Lead Developer.

Environment : Visual Studio, ARM.

Tools : Trace32, GIT, SmartGit, DOORS, CANape.

Programming Language: C++

Responsibilities:

- Developed software for Maneuver Steering Support system features.
- Analyzed customer system requirements to develop product-specific functionalities.
- Designed high-level system architecture and conducted unit testing.
- Coordinated vehicle testing and facilitated integration with partner ECU systems.
- Responsible for KPI issue analysis and performance optimization.

Project: Advanced Driver Assistance System (APC, CTA, AEB, HMI & TLA) **(Aug 2019 -Dec 2022)**

Client : Mercedes Benz
Role : Senior Developer, Function Owner.
Environment : Visual Studio, ARM
Tools : Trace32, GIT, Smart Git, DOORS, CANape.
Programming Language: C++, MATLAB (STATEFLOW & SIMULINK).
Responsibilities:

- Led the development of various ADAS parking features, including Automatic Parking, Remote Parking, and Cross Traffic Alert.
- Function Owner responsible for requirement engineering and alignment with product line and customer requirements.
- Developed high-level system design and conducted risk analysis.
- Conducted SIL and MIL testing for model-based development applications, improving performance and reducing defect rates.
- Responsible for Risk Analysis and Release Note for software deliverables.
- Delivered release notes and managed risk for software deliverables.

Project: Low Speed Maneuver Guidance **(May 2018 -AUG 2019)**

Client : JLR
Role : Team Member Developer.
Environment : Visual Studio, ARM
Tools : Trace32, GIT, Smart Git, DOORS, CANape.
Programming Language: C++, MATLAB (STATEFLOW & SIMULINK).
Responsibilities:

- Developed software to support low-speed maneuver guidance, with focus on test simulations and hardware setup.
- Conducted requirement engineering to meet customer and product line specifications.

ACHIEVEMENTS

- Filed a patent in January 2024 for an innovative automotive software solution aimed at enhancing ADAS functionality.

EDUCATIONAL QUALIFICATION:

- **Tech in Electronics and Communication Engineering (ECE):** Andhra University, 2017
- **Technology Entrepreneurship Program:** Indian School of Business (ISB)

PERSONAL DETAILS:

- Date of Birth: 8th July 1996
- Languages Known: English, Telugu
- Nationality: Indian
- Hobbies: Playing cricket, farming

DECLARATION:

I do hereby declare that the above information is true to the best of my knowledge.

Date : 23-04-2025 D NAGA RAVI VARMA