

# Govardhan Reddy Kothinti

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758 Balsam circle,  
Rochester hills, Michigan  
United States - 48307.

Around 20+ years of Experience in Real-time embedded Systems Development, Project/Program Management, Leading Functional teams, and Serving as the focal point for technical and functional integrations with Customers, suppliers, and Process Improvement.

## Areas of Expertise:

- Extensive Experience in successfully launching Electronic Modules/Systems and Leading Cross-Functional Teams in System Development, SW Development, Verification & Validation, and Functional Safety Management.
- The focal point for the customer, negotiating the specifications and translating them to system requirements. Supplier management, cost estimations, defining the delivery milestones, and ensuring the deliveries with Quality.
- Integrate with cross-function teams, including Electronics, Systems, and Safety & improve the architecture. Conduct architecture reviews by collaborating with cross-function teams, including customers.
- Provide team leadership, Program/Project Management, including technical guidance, resolving issues, and mentoring. Collaborate in continuous improvement efforts to reduce costs and comply with automotive specifications
- Analyze product requirements, define Systems & Software requirements, and participate in reviews.
- Experience performing the Tasks breakdown, modularizing, planning, scheduling, and tracking. Managed small to medium size teams in Onsite-Offshore and Onsite models.
- Experience in Leading and Implementing Automotive SPICE®, AUTOSAR (Automotive Open System Architecture), and Functional Safety ISO 26262.
- Work Experience in Advanced technologies such as ADAS, Electrification & Autonomous driving (L2+ level).
- Experience managing projects in Agile Project Management Methodology and Scrum.
- Experience handling Stages of Involvement (SOI) Audits for Federal Aviation Authority (FAA) and Automotive SPICE® Audits.

## Technical Expertise:

- Programming languages: C, C++, Assembly, and Scripting languages: Perl, GRP Scripting, and Tcl/Tk
- Target Environments: Microprocessor 8085, 8051 microcontrollers, Power PC (MPC5554), and DSP Processors (TMS320F2812 and TMS320F28335). IDE's/source-level Debugger: Pathfinder and Code Composer Studio.
- Development Tools (Debuggers, simulators, and Emulators): Ashling Path Finder Emulator, Code Composer Studio, Matlab Simulink, State Flow, FDxplorer, CANdelaStudio, Vector CAN Analyzer, A651 Data Loader, Proprietary RTOS, Vector LIN, ODACS simulation, Medini Analyze, Enterprise Architect and Ethernet Manager.
- Static Analysis and Testing tools: LDRA, Vectorcast, LabView, NI-Test stand, Ethernet Manager, and Rational Test Real-time (RTRT). Embedded Protocols: CAN, SPI, LIN, TTP, AFDX, ARNIC 429, and RS232.
- Code Inspection Tools: Understand ADA, Telelogic Rule checker, and Understand C/C++
- Documentation tools: Microsoft Visio, Word, Excel, and PowerPoint
- Configuration Management: JIRA, Confluence, PLM System Release management, Synergy CM & Change, SVN, Serena Dimensions (PVCS), MKS Integrity, Rational Clear Case, and Rational Team Concert.
- Requirements Management tools: Polarion, Confluence, MKS Integrity, and DOORS.

## Professional Certifications:

- **Functional Safety Certified Automotive Engineer (FSCAE)** certification from



TUV Nord Systems GmbH & Co. KG. License/ Credential ID: A031\_01386/18

- **Project Management Professional (PMP)®** certification from



Project Management Institute (PMI). (PMP)® Credential Number: 2591433

## Education Summary:

- **Master of Business Administration (MBA)** in project management (Mar 2023) - Indiana Wesleyan University, Marion, Indiana.
- **Bachelor of Engineering and Technology (BTech)** in Electronics and Instrumentation Engineering - April 2005, Jawaharlal Nehru Technological university (JNTU), Hyderabad, India.
- **Diploma** in Electronics and Instrumentation Engineering May 2001, State Board of Technical Education (SBTET), Hyderabad, India.

## Professional Experience:

### • **APTIV** • APTIV PLC | Troy, MI | June'22 – Present

Working as a **System Safety Expert/Functional Safety Manager** for the Advanced Safety and User Experience (ADAS) Group.

- Led L2, L2+, and L3 ADAS projects, driving functional safety strategies aligned with ISO 26262 to achieve industry-leading safety standards and advance cutting-edge autonomous technology.
- Acted as a technical leader, guiding the development and implementation of innovative safety architectures, fail-operational systems, and adaptive control strategies to enhance system reliability.
- Directed cross-functional teams to align engineering efforts, ensuring proactive safety management and the timely delivery of high-quality, safety-compliant products.
- Developed comprehensive safety cases, conducted thorough safety audits, and ensured strict compliance with safety standards, including complex elements like ASIL decomposition and Freedom from Interference (FFI).
- Spearheaded the adoption of advanced testing and validation frameworks, incorporating ISO 26262 design techniques such as modular redundancy, diagnostic coverage analysis, and fail-silent and fail-operational mechanisms to ensure robust safety performance in autonomous driving functionalities.
- Mentored and guided teams, fostering a culture of continuous improvement and innovation, setting new benchmarks for safety practices and quality.

#### **Key Accomplishments:**

- Delivered high-profile Jeep Grand Cherokee (WL), Jeep Wagoneer and Grand Wagoneer (WS), and Ram 1500 (DT) projects, ensuring full safety compliance and meeting Product Development Process (PDP) milestones with exceptional quality and innovation.
- Successfully developed and secured approval for safety cases for hands-free driving projects after extensive collaboration with audit, assessment, and customer teams.
- Led the adoption and integration of advanced autonomous safety protocols, enhancing resilience and predictive capabilities through innovative diagnostic and fault-tolerant systems.
- Authored and shared pioneering safety methodologies recognized in industry forums, contributing to advancements in autonomous driving standards.
- Strengthened Aptiv's leadership in ADAS through strategic partnerships and active influence on global safety best practices, cementing its reputation as a leader in cutting-edge, innovative autonomous technology.



### **Methodica Technologies | Troy, MI & India | Feb'20 – May'22 and Jul'15 – Jul'18**



### **American Axle Manufacturing**

Has worked as an Technical Project Manager/Embedded Principal Architect for the Electronics Controls Group.

- Lead the WL/DJ/KL/JL/JT smart bar (Stabilizer and Sway Bar) Programs in the Mechatronics group for all the System/Software activities, planning, managing all the activities related to software development, Hardware, Mechanical, integration, Functional Safety, and validation activities.
- Creation of the Project Management Plan, defining the scopes, Issues, and risks, and working with senior management to Execute the Project. Work with cross-functional teams, customers, and suppliers to plan and manage the Deliveries.
- Leading the Programs and Driving the Development of the Process, Cost Saving, and Methodology implementation for the Organizational Implementation of the ASPICE.



**Stellantis** |



**Magneti Marelli**

Has Worked as an Sr. Software Engineer/**Systems Architect** for Body Control Module (BCM) and Standard Lighting Module (SLM) System development.

- Customer requirements analysis, development of System Requirements, System architecture, Interface requirements, and Communication Interfaces. Development of the System & Software Architecture, Identification of the Functional Safety Modules, and definition of the Functional Safety path. Identify Failures, Safety Mechanisms, and Diagnostics, defining DTC conditions, and Recovery Mechanisms.
- Conduct Architecture, System & Software Requirements Reviews by collaborating with electronics, Systems, and Safety teams. Requirements and configuration management using DOORS, Rational ClearCase, and Concert Client.
- Planning and Managing the System and Requirement Team Activities and Follow-up with Deliveries and Project Milestones. Serve as the focal point for technical & functional integrations between Onsite & Offshore teams.
- Support creating safety analyses (FMEAs, FMEDA, FTA) and DVPR.

- Work as part of the Methodology Team to implement the A-Spice Methodology and Strategies for the Cost saving of the Group.

#### **Accomplishments:**

- Successfully led the Functional teams in delivering the products with all the agreed artifacts within the specified milestones and with Quality.
- Successfully Implemented and Managed the System activities for the Releases including the planning of events, Gap Analysis, Impact Analysis, Training, Knowledge management, and the process in the development stage.
- Successfully Implemented Automotive SPICE®, did Process Enhancements and Cost savings in the Process groups, and activities with Aspice Experience.
- Successfully led and completed the System and Software activities for the Chrysler Models KL15, KL16, KL17, K8, and KL19 Models, which have gone through the Production Phases.
- Completed the System Activities, Concept validation, and performing with the Engineer Development phase for the Standard Lighting Module (SLM) Chrysler 2021 Models.



#### **Cummins Inc | Columbus, Indiana | Jul'18 – Jan'20**

Has worked as a **Technical Advisor/System Architect Technical Leader** for the Common Electronics Technical Foundation group to improve Software system competency.

- Worked as part of the System Architecture groups and led the team in building the new generation Architecture based on Autosar for the System/Software architecture Group.
- Leading the Functional Safety for the Common Electronics Technical Foundations group, activities include defining the Functional Safety activities, providing the training, and leading the activities related to Functional Safety in the System and Software Development Area.
- Leading the System Architecture related to CSAR Programs, Defining the Interfaces, and capturing the Requirements in discussion across Cross-functional teams, Requirements Management, Baseline, Traceability, and Release.
- Leading the Programs and Driving the Development of the Process, Cost Saving, and Methodology implementation for the Organizational Implementation of the ASPICE and CMMI 3 across the CE Technical Foundation group.

#### **Accomplishments:**

- Successfully led the System Teams in capturing customer requirements and disseminating them to the Software, Hardware, Mechanical, and Design levels.
- Successfully Implemented and Managed the Functional Safety ISO 26262 activities, which included Training and Knowledge management, planning of events, Gap Analysis, and Impact Analysis, and the process is in the development stage.
- Successfully Implemented Automotive Spice, did Process Enhancements and Cost savings in the Process groups, and activities with ASpice Experience.



#### **HCL Group ( HCL America Inc, HCL Great Britain Ltd, and HCL Technologies Ltd )**

**Customers: UTC Aerospace Systems and Turbo Power Systems | Locations: Rockford IL, Newcastle, UK, and Bangalore, India: Mar'06 – Jul'15**



#### **UTC Aerospace Systems| Rockford, IL, USA**

Worked as **Associated Technical Manager**, Software Developer, and Systems Engineer for Secondary Power Distribution System (SPDA), Strategic Fan Motor Controller (SFMC), and Remote Power Distribution System (RPDS) for Boeing 787 Dreamliner and MRJ (MITSUBISHI REGIONAL JET) Aircrafts.



#### **Turbo Power Systems | Newcastle, United Kingdom**

Worked as a Software developer and Integration Testing Engineer for Air Management System (AMS) for Airbus A380 and Hydraulic Interface Function (HYDIF) & Ram Fan Motor Controller (RFMC) for Boeing 787 Dreamliner Aircrafts.

- Developed System architecture, System Requirements, and Communication Interfaces.
- Developed Software, Debugging, and review in C language and Model-Based Development Simulink models. Conducted design reviews, architecture reviews, and Safety reviews.
- Developed the Boot, Test link, Built-in Test (BITE), Ram utilities, and Applications Software and deployed on MPC5554 and DSP Processors (TMS320F2812 and TMS320F28335) platforms.

- Configure linker, make files and IDEs to build and generate src/elf files for MPC5554 hardware
- Develop the Module tests, Requirement based Tests, and perform the testing on Vector cast, JTAG Debugger, LDRA, RTRT, and Ethernet Manager.
- Project Management Activities, Task & Resources Planning, Execution, Monitoring, and Delivery.

#### Accomplishments:

- Completed the System and Software activities for the SPDA, SFMC, and RPDS for Boeing 787 Dreamliner with certified phases (SOI) from FAA which have gone through the Production Phases.
- Certified by the Federal Aviation Authority (FAA) with all the SOI Audits in all phases of Development, Verification, and Validation for Level B of DO-178B Standard.
- Successful Completion of the Integration testing Projects RPDS ahead of the schedules and SOI Audit stages and certification from FAA for the Level B of DO-178B Standard.
- Implementation of the DO-178B Software Development Process Guideline and Process Improvements.



#### International Awards and Honors:

- ✚ **Stevie® Awards for Technology Excellence: Technology Excellence award for "Pioneering Safety and Sustainability in Advanced Autonomous Driving Technology".**



- ✚ **TITAN Innovation Awards Gold winner: Innovation in Technology - Vehicle Technology category**



- ✚ **TITAN Business Awards Gold Winner in the Information Technology - Technical Professional of the Year category**



- ✚ **Globe® Awards Bronze Winner : Product-Service Leadership of the Year in Technology Products**



#### International Scholarly Publications:

- **International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET):**

- ❖ The Future of Transportation: Navigating the Era of Automated and Autonomous Vehicles - [Publication Link](#)



- **International Journal for Research in Applied Science & Engineering Technology (IJRASET):**

- ❖ Advancing Functional Safety in Automated Driving: A Methodological Approach to Legacy System Integration under ISO 26262- [Publication Link](#)



- **International Journal Of Engineering And Technology Research (IJETR) :**

- ❖ Robotic and autonomous vehicles for defense and security: a comprehensive review - [Publication Link](#)



- **International Journal of Computer Engineering and Technology (IJCET) :**

- ❖ ENHANCING MACHINE LEARNING SAFETY IN AUTONOMOUS PRACTICAL STRATEGIES AND SOLUTIONS FOR IMPROVED RELIABILITY. - [Publication Link](#)



VEHICLES:

- **International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET):**

- ❖ Exploring Driver Reactions to Deceptive Traffic Signals in AI-Powered Autonomous Driving - [Publication Link](#)



- **The International Association for Engineering and Management Education (IAEME):**





- ❖ DECODING BEHAVIORAL INTENTIONS TOWARDS AUTONOMOUS VEHICLES: A META-ANALYSIS AND EMPIRICAL STUDY - [Publication Link](#)







## International Organization Membership Associations:

- **Institute of Electrical and Electronics Engineers (IEEE)**  
 Senior Member. Jun 2024 – Present.
- **Institution of Electronics and Telecommunication Engineers (IETE)**  
 Fellow. Jul 2024 – Present.
- **The International Association for Engineering and Management Education (IAEME)**  
 Fellow. Sep 2024 – Present.
- **Sigma Xi, The Scientific Research Honor Society**  
 Fulltime Membership. Sep 2024 – Present.



## Volunteering – Reviewer/Judge for Conferences:

- **Industry Judge for 12th Annual 2024**  **Globee® Awards for Leadership**
- **2024 IEEE 12th Region 10 Humanitarian Technology Conference**   
 Organized by Institute of Electrical and Electronics Engineers (IEEE), Sustainable Technologies Supporting Environment, Social and Governance (ESG) at Kuala Lumpur, Malaysia.
- **5th International Conference on Smart Sensors and Applications (ICSSA) 2024**   
 Organized by Universiti Teknologi Malaysia (UTM) at Penang, Malaysia.
- **36th Conference of Open Innovations Association FRUCT**   
 Organized by Lappeenranta-Lahti University of Technology (LUT), Lappeenranta, Finland.
- **International Conference on Information Technology and Intelligence (ITI 2024)**   
 at Dr. B. R. Ambedkar Institute of Technology (DBRAIT), Andaman and Nicobar, Port Blair, India.
- **8th International Joint Conference on Advances in Computational Intelligence (IJCACI 2024)**   
 Organized by SAU Center for Research and Innovative Learning (SCRIL), South Asian University, India and Jahangirnagar University, Bangladesh.
- **6th International Conference on Communication and Intelligent Systems (ICCIS2024)**   
 Organized at Maulana Azad National Institute of Technology (MANIT), Bhopal.
- **4th IEEE International Conference on Artificial Intelligence and Signal Processing (AISP) 2024**   
 at Vellore Institute of Technology, Andhra Pradesh, India.
- **Industry Judge for 14th Annual 2024 Globee® Business Awards** 



## International Media Publications:



INTERNATIONAL BUSINESS TIMES

- **Innovative Strategies Enhancing Machine Learning Safety in Autonomous Vehicles**
  - Media Link: <https://www.ibtimes.co.in/innovative-strategies-enhancing-machine-learning-safety-autonomous-vehicles-872454>
- **Autonomous Vehicles: The Vanguard of Transportation's Future**

- Media Link: <https://www.ibtimes.co.in/autonomous-vehicles-vanguard-transportations-future-872169>

## NEWS **ANYWAY**

### ➤ A Glimpse Into the Future: Behavioral Intentions Towards Autonomous Vehicles

- Media Link: <https://www.newsanyway.com/2024/10/25/a-glimpse-into-the-future-behavioral-intentions-towards-autonomous-vehicles/>



### ➤ Navigating the Challenges of AI in Autonomous Driving

- Media Link: <https://techbullion.com/navigating-the-challenges-of-ai-in-autonomous-driving/>

### ➤ Innovating Defense: The Impact of Robotic and Autonomous Vehicles on Security

- Media Link: <https://techbullion.com/innovating-defense-the-impact-of-robotic-and-autonomous-vehicles-on-security/>

## Medium

### ➤ Freedom from Interference (FFI): A Deep Dive into Ensuring Functional Safety in Automotive Systems

- Media Link: <https://medium.com/@govardhanrkothinti/freedom-from-interference-ffi-in-iso-26262-a-deep-dive-into-ensuring-functional-safety-in-db189d4ad3a4>

### ➤ Decoding Behavioral Intentions Towards Autonomous Vehicles: A Meta-Analysis

- Media Link: <https://medium.com/@govardhanrkothinti/decoding-behavioral-intentions-towards-autonomous-vehicles-a-meta-analysis-ca6845b53e77>

### ➤ Functional Safety in Autonomous Vehicles: A Comprehensive Guide

- Media Link: <https://medium.com/@govardhanrkothinti/functional-safety-in-autonomous-vehicles-a-comprehensive-guide-09db2e7d92dd>

### ➤ Configuring the Watchdog for FTTI in ISO 26262 with Supervised Entities (SE)

- Media Link: <https://medium.com/@govardhanrkothinti/configuring-the-watchdog-for-ftti-in-iso-26262-with-supervised-entities-se-9ba3619b845e>

### ➤ ISO26262 — Fault Tolerance Time Interval(FTTI)

- Media Link: <https://medium.com/@govardhanrkothinti/iso26262-fault-tolerance-time-interval-ftti-559534df3977>

### ➤ Enhancing Machine Learning Safety in Autonomous Vehicles: Advanced Strategies for Reliability and Robustness

- Media Link: <https://medium.com/@govardhanrkothinti/enhancing-machine-learning-safety-in-autonomous-vehicles-advanced-strategies-for-reliability-and-658d821404c0>

### ➤ Dependent Failure Analysis (DFA) in ISO 26262: Addressing Cascade and Common Cause Failures

- Media Link: <https://medium.com/@govardhanrkothinti/dependent-failure-analysis-dfa-in-iso-26262-addressing-cascade-and-common-cause-failures-b6e9b0c6fe39>

### ➤ ISO 26262 vs. SOTIF: A Comparative Overview

- Media Link: <https://medium.com/@govardhanrkothinti/iso-26262-vs-sotif-a-comparative-overview-cdf55b636f8e>