## Professional Summary

Distinguished Systems Engineer with a 14+ Years of specialized experience in automotive design, focusing on ECS/SE Tools and processes. Proficient in translating intricate customer requirements into precise system design specifications, conducting comprehensive analyses of production-scale ECS software and hardware, and facilitating seamless system integration. Adept at managing complex requirements and tracking issues with precision. Exceptional communicator with a proven ability to mentor teams and deliver technical solutions that drive project success.

## Education Bachelor of Engineering in Computer Science and Engineering *M. Kumarasamy College of Engineering, Anna University, India (2005 – 2009)*

## Certification

* SAFe® 5 Practitioner: Issuer: Scaled Agile Inc
* Green Belt Certification: Issue Management Project
* Six Sigma DFSS Stats for Black Belt Certification: Tool and Process Issues in Automotive
* Completed DMAIC project: Reduction in Time for Estimation Efforts of Rational DOORS Training.

## Employment Eligibility

* Visa Type: H1B
* I140: Approved

## Work Location

### Companies (Direct)

* + General Motors **Jan 2019 – Present** Warren, Michigan, USA
  + Capgemini America May 2016 – Jan 2019 Warren, Michigan, USA
  + Tata Consultancy Services Feb 2010 – May 2016 Warren, Michigan, USA Bengaluru, Pune, Chennai, India

### Companies (Client)

* + General Motors Oct 2014 – Jan 2019 Warren, Michigan, USA
  + Electro Motive Diesel (Progress Rail – A Caterpillar Company) Feb 2010 – 2014 Chicago, IL, USA Pune, Chennai, India

## **Skills**

**Tools & Software**

* **IBM Rational Suites**: DOORS, DOORS Next, Global Configuration, Team Concert, Synergy, Change, Quality Manager, Jazz Reporting Services, Engineering Test Management, Rational Publishing Engine
* **Suite Tools**: Git Ecosystem (Gerrit, Jenkins), QNX Momentics Developer Suite, Visual Studio
* **Operating Systems**: Windows, Unix/Linux, QNX RTOS
* **Programming Languages**: Embedded C, C++, DXL Script, Python, Shell Scripting
* **Development Guidelines**: MISRA C/C++
* **License Management**: IBM Key Center
* **Document Management**: OneNote Centrals, Markdown, SharePoint
* **Variation Management**: Big Lever GEARS (integrated with DOORS and DOORS Next)
* **Databases**: Informix, MS Access, SQL (Basics)

**Requirements & Issue Management**

* **Requirements Management**: IBM DOORS 9.8, DOORS Next Generation 7.0.2, JAMA
* **Issue Tracking**: JIRA, JIRA Align, IBM Rational Team Concert, Self-Designed Issue Management Tool, Migration Tracking List

**Testing & Development**

* **Testing**: Bench Testing, Root Cause Analysis, Engineering Test Management (Pilot) Development
* **CI/CD**: Continuous Integration & Continuous Deployment (CI/CD)
* **Development Approaches**: Behavior-Driven Development (BDD), Test-Driven Development (TDD)

**Other Technical Skills**

* **SharePoint**: Design, Form Lists, Power Apps (Microsoft Flow, Power Automate), Site Administration

**Communication & Leadership**

* Strong interpersonal skills, team builder, mentor

## Current Major Activity – Inprocess

IBM Rational DOORS to DOORS Next Migration: Critical Lead process developer and executor in DOORS to DNG Migration with automation and migration development. Developed an organization tracking system for end-to-end migration.

## **Professional Experience**

* System Specification Process & support: Orchestrated the creation of ECS System Specifications, ensuring stringent alignment with customer requirements and industry standards.
* Documentation and Control: Authored exhaustive Electrical Interface and Control Documents procedure in DOORS & DOORS Next, facilitating unambiguous communication and implementation across multidisciplinary engineering teams.
* Test Case Management: Supervised the review and approval of system test cases, ensuring comprehensive coverage in validation of Migration script.
* Failure Analysis: Conducted meticulous analysis of internal test failures, identifying root causes and implementing efficacious mitigation strategies.
* Customer Integration Support: Provided expert support for customer system integration efforts through detailed data log analysis, conference calls.
* Issue Resolution: Collaborated with Electrical control system teams to diagnose and resolve ECS-Tool and Process related issues, enhancing system reliability and performance.
* Process Adherence: Adhered to established development processes and tool chain implementations, contributing to the achievement of development quality goals.
* Root Cause Analysis: Performed in-depth root cause analysis of software bugs, developing and implementing robust mitigation actions.
* Validation Support: Supported requirements and test case to ensure compliance with design specifications and performance criteria for DOORS to DNG. Creating Pilot programming in Engineering Test Management to General Motors.
* Requirements Management: Utilized IBM DOORS and Doors Next Generation to support and maintain detailed requirements, ensuring traceability and compliance for ECS teams.
* Communication and Reporting: Effectively communicated ECS design specifications to Software and Validation Teams using JIRA and IBM RTC and provided regular project status updates to Project Lead.
* Process Improvement: Contributed to continuous process improvement initiatives, enhancing overall project efficiency and effectiveness.
* Collaboration and Mentorship: Providing technical guidance and solutions to Track Engineers with intern helped in development, and mentored team members.
* KPI Tracking: Generated and tracked Key Performance Indicators (KPIs) to measure project health and status, ensuring timely and successful project delivery.
* CI / CD Solution Basics: Conceived a high-level vision for Continuous Integration & Continuous Deployment (CI/CD) automated testing infrastructure focused on building and testing MCU/Aggregator controller software intended for Software Defined Vehicle (SDV) applications. GM targets to define & implement key pipelines to carry out the automation and implementation of dashboards to communicate the health of the system as well as statistics associated with the assets being produced. The main objective of the CICD framework is to develop a platform to standardize CI/CD process across Components, Pods & Controllers and to provide comprehensive view of projects health based on predefined KPIs through Quality Dashboards.

**ECS/SE Tools & Process, Core System Tools & Automations General Motors - Warren, Michigan.**

**2014 – Present**

* Migration of DOORS Next to JAMA (Pilot): Created a pilot environment for JAMA Connect setup for the migration of requirement modules from DOORS and DOORS Next. Explored configuration management options in JAMA Connect. Coordinated with requirement management and test management tool developers and administrators for customization.
* Document Management Product Owner (Markdown): Maintained Electrical Control System and System Engineering departments' tools and process documentation, announcements, and release letters. Migrated various document inputs to Markdown and version controlled using GitEcosystem and SharePoint Online.
* User Adoption and Training: Provided first and second level support to resolve user issues, optimize and deploy IBM Rational DOORS, Doors Next Generation (DNG), Global Configuration Management, Team Concert, Rhapsody, Synergy, Quality Manager, and Big Lever GEARS software tools. Supported Electrical Control System and Systems Engineering Departments through all phases of Application Lifecycle Management (ALM), including setting engineering requirements, managing changes, version control, storage, testing, and production of test results for conventional, electric, and autonomous passenger vehicles. Conducted Rational tools requirements gathering, created project management processes for engineering teams, including engineering frameworks and rulesets, and obtained feedback to identify improvement areas. Analyzed system or module requirements from different business groups and supported migration of requirements into Requirement Management System tools. Troubleshot tools usage issues, provided user support, and customized features of IBM Rational DOORS, GCM, and DNG tools for effective usage and business requirements. Coordinated engineering requirement review meetings to analyze new system requirements and supported requirements gathering for teams. Coordinated partners, stakeholders, and engineering working groups engaged in project work.
* Process Development and Execution: Acted as the critical lead process developer and executor in DOORS to DNG migration with automation and script development. Developed an organization tracking system for end-to-end migration, ensuring seamless transition and minimal disruption to ongoing projects. Implemented automated scripts to streamline the migration process, reducing manual effort and increasing accuracy. Conducted extensive testing and validation to ensure data integrity and compliance with industry standards. Provided training and support to engineering teams to facilitate the adoption of new tools and processes.

### **Developer and Support Engineer Electromotive Diesels (Progress Rail) – India.**

### **2010 – 2014**

* GUI Migration: Migrated FIRE GUI (Functionally Integrated Railroad Electronics Graphical User Interface) library functionalities from Windows MFC (Microsoft Foundation Class) to QNX equivalent code using C++ programming.
* GUI Enhancement: Enhanced and rectified defects in the GUI code on QNX Momentics, integrating FIRE GUI code with various internal department sources, middleware, and control systems.
* Traceability: Completed traceability of high-level and low-level requirements from DOORS to the object-oriented modeling code in Rhapsody.
* Tools Upgrade and Integration: Installed and configured all prerequisite software for Rational applications and configured subsequent patches in Red-Hat Enterprise Linux on development, user acceptance test, and production environments. Integrated Rational suites.
* Tools Administration: Managed crises in production environments, implemented repairs for long-term reliability, performed application tuning, code restructuring, and other efforts to improve efficiency and reliability of programs, reducing maintenance activity frequency. Provided business support for users, resolved user queries, problems, and system errors, and administered users, groups, profiles, and work areas.

Declaration:

I hereby declare that the information provided above is true to the best of my knowledge and belief.