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| Summary | Solutions driven Electrical Engineer with 8+ years of professional experience in AUTOSAR, Embedded/HIL, ADAS, and EOL testing. Skilled in Integration, Verification & Validation. Proficient in both Manual and Automation testing of Vehicle Diagnostic services. |

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| Technical Skills | |  |  | | --- | --- | | * C language * Python- Hands on * dSpace * Automation Desk * Control Desk * INCA * QNX * CANoe * Testing and debugging * ISO 14229 ECU flashing structure * ISO 26262 Functional Safety * Performance Testing * Software testing * Issue Resolution * DFMEA * Code reviews * Virtualization Technologies * Vehicle Spy * MATLAB- Hands on * IBM Rational Change/CCM | * Scrum Methodology * JIRA & IBM DOORS * DPS * GBFTT * ISOLAR * CAN * LIN * ETHERNET * RS 232 * Network protocols (TCP/IP protocol) * Software Development Life Cycle (SDLC) * DFSS Black Belt * Sprint Planning * Backlog management * Release planning * Team facilitation * Cross-functional coordination * Leading scrum meetings * Microsoft Tools | |

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| Experience | Software Engineer | 08/2021 to 09/2024  General Motors - Milford, MI   * Responsible for execution and planning for UBSW Engine controller validation and testing. * Identifying the root cause of the issues and providing the reports in the event of ECU development testing. * Coordinating and supporting software developers in UBSW ECU software development stage for Dyno and IVER releases. * Working with ECU teams to ensure software releases are aligned with the GM release dates and making sure Tier1s follow the release date, and help them resolve any issues that arise, delaying the software. * Contributed to the GM and Cruise repository on GitHub by implementing features and fixing bugs, improving project stability and performance. * Executing controller integration on time and with quality to meet the program milestones. Providing controller integration issue status to leadership and appropriate program teams. * Working with technical specialists to resolve challenging system interaction issues, working to create a robust method to predict and prevent integration issues, and developing robust system issue resolving techniques and technologies. * Aligning with current GM Virtual testing and developing new robust test cases that would cover all the possible test scenarios for UBSW. * Supervising SUB PDTs for various UBSW controllers globally and resolving issues relating to UBSW development. * Analyzing the ECU issues, working with the required teams, and tracking the issue to closure. * Ethernet configurations in vehicle embedded controls, electrical architecture, and integration. * Conducting brainstorming sessions on the latest trends in software engineering, quality, architecture, and development processes. * Analyzing system-level software developed across the organization to improve software quality. * Analyzing and developing software solutions by reducing the complexity of code and performing software peer reviews. * Reviewing existing software to improve quality, maintainability, reusability, and other software improvements. * Identifying and performing the root cause analysis of problems in system features, controller hardware, software, calibration, etc. that result in system operation that does not meet design intent or customer requirements. * Developing and working on setting the standards for models and code within the organization to align with optimum software architecture practices. * Troubleshooting the code to resolve design deficiencies and developing solutions. * Coordinating with cross-functional teams, such as Systems & Safety Engineering, Electrical Architecture, and Core Software Tools & Architecture, to drive system-level analysis for software solutions being developed across the organizations. * Implemented automated build and deployment processes for applications with CI and CD tools. * Created detailed design documents, test plans, user manuals, release notes, and other related documentation. * Familiarity with embedded firmware development tools, including debugging capabilities, code tracing, and problem-solving involving both firmware and hardware. * Monitored system performance and troubleshooted issues in the production environment. * Provided technical support to customers regarding product usage and troubleshooting issues. * Participated in regular meetings with stakeholders to discuss project progress, changes, and challenges.   Electrified Powertrain Software Component HIL Verification Engineer | 03/2020 to 08/2021  Fiat Chrysler Automobiles-FCA - Auburn Hills, MI   * Setting up the measurement environment using dSpace, Control Desk, and CANoe. * Performed data analysis for calibration adjustments in INCA * Flashing plant model software on the HIL setup. * Integrated plant models from multiple vehicle domains * Developing and executing test plans within Automation Desk for multiple releases. * Compiling verification and test documentation for the automation desk * Ensured robust integration between Transmission and other ECU software * Modifying existing test scripts in alignment with system requirements * Revised scripts to streamline report generation * Deployed CANoe/CANalyzer for comprehensive network parameter assessment * Optimized monitoring processes with specialized tools like INCA and MDA * Tested functionalities in Component HIL * Configuring INCA hardware * Creating experiments and measurement displays in INCA. * Using Calibration displays to change the calibration values through INCA working page. * Downloading and flashing the software from Reference page to Working Page * Measuring Calibration data, Configurations, and databases on the INCA * Performing post- analysis of the measured data, comparing different calibration data * Developing HIL test automation solutions for Integration testing of vehicle features and functions, demonstrated technical and professional skills in job- related area as required * (Auburn Hills, MI) * Additional Responsibilities in Integration: Creating Software Release notes for all the assigned releases * Gathering ACR's and SWCR's from Rational Change and merging them to release notes * Updating SWCR's in the IBM rational Change * Involving in Code Generation for certain rings in the release * Participating in daily Scrum meetings via IBM- Change and Configuration Management * Updating CFTS document in ACR's for tracking purpose   Vehicle Software Integration Engineer - VSIE | 03/2018 to 03/2020  General Motors - Warren, MI   * Responsible for the integration and high-level testing of vehicle electronic control systems and software. * Executed bench-level Design Integration Testing (DIT) of VesCoM releases prior to vehicle builds and rides to identify and resolve significant software integration issues. * Verify GMLAN and Serial data communication (CAN, LIN) between all vehicle controllers, IOs, and user interfaces. * Performed data acquisition on CAN, LIN, and cybersecurity communication buses with debugging tool for analysis. * Identify issues and communicate them to DREs (Design Release Engineers), suppliers, and work with them to ensure issues are resolved in the course of time. * Support/Conduct pre-IV (Integration Vehicle) GBFTT Readiness Testing with Assembly Verification team. * Review and approve development vehicle software and hardware configurations with Controls Manager prior to tests and ride trips. * Coordinate 3PD Master Parts List for serial data components creation for pre-production builds to allow flash programming. * Support pre-production data file readiness and software assessment, and create IVER Software and Calibrations documentation. * Support pre-production and production build activities, and vehicle ride trips as required. * Monitor End of Line Test results during vehicle launch and assist in investigation of issues. * Troubleshoot and root cause hardware and software end-of-line (EOL) issues in the plant. * Support root-cause effort for problem resolution to component level. * Recorded ESIMS entries in GM database to track issues * Ensured closure of ESIMS by closely tracking progress in PRTS * Trained in Doors, Rational Team Concert, and Rhapsody. * Supporting all Vehicle Software during major development milestones and ensuring that the release has the desired functionalities to achieve certain milestones.   Software Test Engineer | 01/2018 to 02/2018  Harman International - Farmington Hills, MI   * Testing Pre-Integration builds upon release for the Infotainment System. * Verifying Merge Requests and Change Requests. * Ticket reproduction upon request and collecting logs from Android Logcat. * Generated requirement-specific test scenarios * Reviewed and updated Artifacts in DNG to align with Customer specifications * Coordinated with remote teams to achieve improved results   Domain Tester | 04/2017 to 12/2017  Panasonic Automotive Systems of America - Peachtree City, GA   * Conducting Bluetooth Sanity Testing for each local build release * Simulated bugs as requested by development team * Utilized Comprobe Protocol Low Energy Analyzer for Air Trace collection * Verifying and closing the defects in the official build and moving to Build Checkout Complete, as per request. * Monitored Bugs in QNX * Collecting Main Micro UDP, Main Micro Serial, Boot Micro Serial Log, CAN logs, BT Air Traces. * Having a good command of Comprobe Protocol Low Energy Analyzer hardware. * Attending the meeting with the offshore team in China, Dalian, and providing them assistance. * Performing Wi-Fi Sanity Testing for every local build release. * Remote operations testing on bench related to Networking. * Gathered SWI logs for issue debugging * Collection Packet - Cap (rmnet0 and rmnet1) logs for analyzing data flow for the vehicle while CAN Speed is Zero and Non-Zero. * Doing FOTA updates as per requests. * SOS and Wi-Fi Functionality Verification and Enhancement * Collecting Main Micro UDP, Main Micro Serial, Boot Micro Serial Log, CAN logs. * Reproducing the defects as per request from the developer and Domain Engineer. * Working on both in-vehicle and bench testing. * Connecting with Sirius XM and AT&T association for registering the vehicle radios for both SOS and Wi-Fi.   Software Test Engineer | 10/2016 to 04/2017  Panasonic Automotive Systems of America (PASA) - Peachtree City, GA   * Performed in Vehicle and Bench Testing for different Infotainment Modules. * Have a good command of Antitheft for both NTG 5\*1 and 5\*2. * Converted head units into antitheft systems * Have a good command on recovering of Head Unit's, which were corrupted for both NTG 5\*1 and 5\*2. * Used TUT to flash the latest build in the Head Unit. * Root Cause Analysis of various functions of BT at message level using BT Sniffer. * Have a good command of Telematics, called Pass Module. * Extensively Checked RVC Functionality for CLA 250, GLA, GLC, and C300 class vehicles. * Good command of FM DAB and FM Multifunctional Generator. * Collecting different kinds of logs like Emergency Logs, PASA Logs, CAN logs, Coral BT Logs, BT Air logs, J4, and V850 logs to perform initial analysis and send them to the developer team for further in-depth analysis. * Captured Coral Bluetooth logs via Head Unit by processing debug files. * Gathered logs from Tele-Motive Link Generator in Vehicle known as BluePirat * Tested on bench and in-vehicle for different modules such as Networking, Media, Android Auto, Apple CarPlay, Baidu Car Life, MB Companion, Mercedes-Benz Link. * Preparing the bug reports for the issues, looking at the logs to separate them using the time of occurrence, and reporting the issues to the developer team in RTC. * Reporting the bugs in the RTM using QNX. * Good knowledge of flashing 'Mot' file using Debug board and Minicubes with the help of RS232 Drivers. * Executed both sanity and regression tests consistently across build updates * Executed Boundary and Category Testing with CTT and Start-up Conditions * Executed comprehensive tests including positive, negative, and corner cases * Executed regression tests for every release * Facilitated cross-border communication to align on project timelines * Participated actively in daily scrum meetings |

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| Education | University of Bridgeport  M.S  Electrical Engineering, **05/2016**  Jawaharlal Nehru Technological University  B. Tech  Electronics and Communications, **05/2014** |

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| Languages | |  |  |  | | --- | --- | --- | | **German**:    Limited |  | **English**:    Native/ Bilingual | |

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| Certifications | * DFSS Black Belt * Certified Scrum Master * SAFe certified * Certified in Defeat Device in Powertrain * Certified in Pre- Production Vehicle Safety |

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| References | References available upon request. |