

Software Development Engineer in Test Software Development Engineer in Test Software Development Engineer in Test - The MathWorks, Inc Framingham, MA Work Experience Software Development Engineer in Test The MathWorks, Inc July 2018 to Present Participate in processes related to Requirement analysis, Function Design, Architectural design to ensure Quality Standards are met for the new features being developed using Agile Methodology * Provide expert Feedback on the new features developed for Simulink Data Management in aspects of functional behavior and suggest necessary improvements for ease of workflow for customers * Develop integration, unit tests to qualify new features for Simulink Data Management using MATLAB, C, C++, Java in multi-OS environment such as Linux, MAC and Windows. * Maintaining Quality standards of existing Simulink data management infrastructure software by fixing bugs and enhancement tasks * Perform Non-Function testing such as Memory, Performance, Availability, Security to ensure no regression Software Developer Caterpillar Inc - Peoria, IL September 2017 to July 2018 * Develop WIN32 API based C++ Application for Windows CE using C++ 11, QT, CAN, TMAC and GNSS * Participate in Code reviews, Hardening, bug fixing of WIN32 based C++ application using Agile methodology * Develop unit test using Google Tests framework in C++ to qualify the software application * Work Closely with customers regarding the field issues and fix complex software bugs using static code analysis Senior Software Engineer Rockwell Collins, India Design Center - Hyderabad, Telangana January 2014 to July 2016 * Developed lower level, derived software requirements from higher level requirements * Developed code for software requirement in C, C++ and MATLAB Simulink as per DO-178B/C Standards * Model based development (MBD) and testing using Simulink and State flow tool chain * Strong experience in Code instrumentation and Fixing the code as per the Code coverage reports * Provided technical assistance for verification effort of an entire module * Valuable experience on requirement traceability analysis (Top down, Bottom up) for software requirements * Good understanding of Structural coverage analysis, Data coupling and Control coupling activities Associate Software, Software Engineer Rockwell Collins, India Design Center - Hyderabad, Telangana July 2011 to December 2013 * Fixing the code as per the Change request (CR) to match implementation as per the software requirements. * Assisted

with developing Python based HSIT test cases and test procedures from software requirements for different design assurance level (DAL) projects

- * Developed and Executed test cases based on Structural Coverage Analysis for code coverage
- * Analyzed software and system requirements per DO-178B/DO-178C guidelines for avionics
- * Created Change request (CR) with detailed descriptions in case of non-compliance with the requirements

Education Master of Engineering in Computer Engineering University of Cincinnati - Cincinnati, OH December 2017 Bachelor of Technology in Electronics and Communication Engineering SASTRA University - Thanjavur, Tamil Nadu May 2011

Skills VISUAL STUDIO, API, C++, CODE GENERATION, DESIGN PATTERNS

Additional Information SKILLS & ABILITIES

- * Outstanding Individual contributor and an exceptional team member
- * Proven ability to develop break through solutions in critical program requirements
- * Strong analytical and problem-solving skills with self-direction and motivation
- * Good exposure to entire software development life cycle related to safety critical embedded applications
- * Strong familiarity with UNIX, LINUX, QNX and Windows CE based development and testing environment
- * Sound understanding of Object-Oriented Programming, Design Patterns (Gang of Four), Data Structure and Algorithms, STL Containers, Generic Programming, Concurrent Programming
- * Sound understanding of Model Based Software development using Simulink, State flow in terms of Simulation and Code Generation

PROGRAMMING LANGUAGES: C, C++, MATLAB, TCL, Python, UML, VERILOG, VHDL

DESIGN & DEVELOPMENT TOOLS: IBM Clear quest, Eclipse IDE, Subversion, Vector Cast, DOORS, Understanding C, Visual Studio Professional Edition, Tab Studio, QT, VAPS XT, Linux, LynxOS, RTOS, QNX, Tortoise SVN, Perl, Vista (Test Environment), GIT, JIRA, JAMA, MATLAB Simulink 2019a, Beyond Compare, Notepad ++, Crucible, HARVEST, GCC compiler, Code composer studio, WIN32 API, Windows CE, Cygwin, Jenkins, GDB debugger, CANape, CANoe, JTAG debugger

COMMUNICATION PROTOCOLS: CAN, J1939, SPI, UART, I2C, ARINC-661, ARINC-429, ARINC-664, AFDX, Ethernet protocols, TCP/IP, TMAC, WIN32 API and other embedded protocols

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