GANESHKUMAR PATIL

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Qualification	Bachelor degree (Electronics and Communication Engineering)
Total IT Experience	14+ Years
Working Company Name	HCL United Kingdom
Current location	Stafford, United Kingdom
Social Network	https://www.linkedin.com/in/ganeshkumar-patil-332a5357
GitHub	https://github.com/ganeshkp

Technical Skills:

Language & Technologies	C, C++, Python, Django, AWS, Bash Scripting, XML, HTML, JavaScript, CSS, SQL, CI/CD, Docker, Jenkins, REST, Webix, NoSQL, Numpy, Scipy, Matplotlib, Plotly, Pandas, Flask, Machine Learning, Deep Learning (Tensorflow, Keras)
Operating System & RTOS	Windows, Linux, micrium μc/os-ii
Requirement Tool	DOORS
Configuration Tool	PVCS, Subversion, Clear Case, Serena, GIT
Modelling Tool	ARTiSAN
Compiler	GNU, MSVC++, cl2000, ICCARM, PIC30-gcc
Debugger	DDD, JTAG, In Circuit Emulators, MULTI Debugger
IDE	MPLAB, VectorCast, RTRT, Code Composer Studio, IAR Embedded Workbench, LDRA, Eclipse, Visual Studio, PyCharm
Other tool	ClearQuest, BugZilla, TeamTrack, Bamboo, JIRA, Confluence
Standards	DO178B, DO178C, Agile Methodologies

Specialities:
- Experience in developing Comtrade signal data analysis and visualization tools using Python.
- Perform Continuous Integration/Continuous Delivery.
- Development of ATE (Automated Test Environment) for HVDC systems.
- Development of Required Test Automation tools to perform test, result analysis and report Generation.
- Software Requirement Analysis, design, development, verification and validation of Real-time embedded safety critical system software.
- Completed Python/Django/SQL/Machine Learning courses on Udemy to gain more knowledge on them.
- Learning Data Science/Docker/AWS/Big data/Hadoop courses on udemy to gain more knowledge on latest technologies.
- Always willing to learn new technologies on Big data, Data Science and Machine Learning.

PROJECT DETAILS:

Project	**HVDC – Test Framework Development (Onsite)**
Client	GE Grid, UK
Software/Tool	Python, Flask, SQL, AWS, XML, HTML, Subversion, JIRA, Bamboo, Confluence, wxPython, JavaScript, CSS, IEC 61850, Makefile, Jenkins, GIT, REST, pandas, numpy, scipy, matplotlib, Plotly, Bash Scripting, Webix
Duration	Sep 2016 to till now

Responsibilities:
- Develop required test automation, result analysis and report generation tools.
- Perform Continuous Integration/Continuous Deployment using Jenkins/bamboo/Git
- Design, Develop and update Automated Test Environment tool to perform Hardware-In-Loop test.
- Develop and implement build and test automation strategy for HVDC new program.
- Develop a standalone tool for fault analysis and automate analysis of protection test faults.
- Identification and capture, interface analysis, coordination, monitoring and verification through to final validation and closure and handover back to operational service.
- Production of specifications, the witnessing of verification and validation activities, and management of the real integration needs of the project stakeholders, including staff, customers and end users.

Project	**Lithium Battery - Verification (Offshore)**
Client	Meggitt Aerospace, USA
Software/Tool	C, LDRA, IAR Embedded Workbench, SERENA Dimensions, Understand C++, micrium µc/os-ii, Python
Microcontroller	STM32F205
Duration	Mar 2016 to Aug 2016

Responsibilities:
- Setup LDRA and IAR Embedded Work bench test environment.
- Perform Software-Software Integration Testing as per DO-178B Level B.
- Perform Memory analysis, source to object code analysis, worst case stack depth analysis, worst case execution timing analysis, control coupling and data coupling activities.
- Involved in SOI3 and SOI4 certification audits.

Project	**European Rail Traffic Management System (ERTMS)-Verification**
Client	ALSTOM, India
Software/Tool	C++, Module Testing and Integration Testing using Rational Test Real Time (RTRT)
Duration	Jul 2015 to Mar 2016

Responsibilities:
- Study and analysis of software requirements
- Develop Unit test scripts using RTRT on C++
- Perform the Unit Testing on the host
- Develop Integration test scripts using RTRT on C++

- Perform the Integration Testing on the host
- Analyze and raise the bugs identified during Unit/Integration testing
- Team management
- Produce necessary reports for delivery
- Planning the Delivery

Project	**Battery Charger (BC2100) – Verification (Offshore)**
Client	Meggitt Aerospace
Software/Tool	C++, LDRA, SERENA Dimensions, micrium μc/os-ii, python, Bash Scripting
Microcontroller	STM32F205
Duration	Jun 2014 to Jun-2015

Responsibilities:
- Lead the team to perform task
- Plan for team activities and Report every week status to management.
- Develop, execute and debug High level and Low Level Test Cases and Test Procedures for DO178B level B by cooperating with team members
- Perform defect prevention activities by performing RRCA
- Perform Memory analysis, source to object code analysis, worst case stack depth analysis, worst case execution timing analysis, control coupling and data coupling activities.
- Involved in SOI3 and SOI4 certification audits.

Project	**Pneumatic System Control (PSC) – Verification/Offshore**
Client	Meggitt, USA
Software/Tool	C, MULTI debugger, RTRT, RC script, ATS
Microcontroller	MPC5554
Duration	Sep 2012 to May 2014

Responsibilities:
- Lead the team to perform task between onsite and offshore
- Estimate plan for team activities
- Perform defect prevention activities
- Develop and execute High level and Low Level Test Cases and Test Procedures for DO178B level A by cooperating with team members
- Perform Memory analysis, source to object code analysis, worst case stack depth analysis, worst case execution timing analysis, control coupling and data coupling activities.
- Involved in SOI3 and SOI4 certification audits.

Project	**Data Concentrator Unit (DCU)-Development/Offshore**
Client	AMETEK, USA
Software/Tool	C, Perl, Code Composer Studio 3.3, DOORS, GEL script
Microcontroller	TMS320F28335
Duration	Aug 2010 to Sep 2012

Responsibilities:
- Update planning documents and standards such as PSAC, SDP and SDS

- Perform requirement analysis and develop software Requirement Document.
- Develop Software low level requirements and low level design.
- Develop the code and perform integration.

Project	**SSPC – Verification/Onsite**
Client	AMETEK, USA
Software/Tool	C, DOORs, MPLAB Simulator, MPLAB ICD2, Python
Microcontroller	PIC24FJ64GA004
Duration	May 2010 to Jul 2010

Responsibilities:
- Review of Functional Requirement Document, Software Requirement Document and Software Design Document
- Develop Target Deployment Port (TDP) for RTRT to interface with MPLAB
- Develop and execute High Level Test Cases and Test Procedures

Project	**A400M-Load Master Control – Development/Offshore**
Client	AIRBUS, Germany
Software/Tool	C, ARTiSAN, DOORs, MS Visio, Clearcase, ClearQuest
Duration	Mar 2009 to Apr-2010

Responsibilities:
- Perform requirement capture for Load master control software.
- Discuss with clients on requirements.
- Develop high level requirements for Built-In-Test (BIT) Module
- Detailed design of Passenger Alert (PA), Cargo Hold and Retrieval System (CHR) Module and Built-In-Test (BIT) Module
- Perform peer reviews of design documents.
- Coding and fixing the integration issues.

Project	**CDNU (Cockpit Display and Navigation Unit)/Offshore**
Client	Thales Avionics (UK).
Software/Tool	C++, Sun Solaris Integrated with Rational Test, MKS
Duration	Oct 2008 to Mar 2009

Responsibilities:
- Involved in active group Verification and Validation of various documents (SyRS, SRS and ICD documents).
- Preparing Functional procedures for Functional requirements.
- Preparing HMI scripts for the events logged on CDNU.
- Preparing test cases (drivers) for functional requirements.
- Preparing test and coverage results and review of deliverables.
- Software problem reporting when applicable.

Project	**A340 Flight Load Test – System Testing/Onsite**
Client	Parker Hannifin Corporation, USA
Software/Tool	C, pRISM+PPC, pRISM+SDS SINGLE STEP DEBUGGER, MKS Source Integrity, CMS Emulator, MultiEdit, VectorCast

Duration	Nov 2007 to Sept 2008

Responsibilities:
- Execution of regression tests, open and closed box qualification tests, safety tests and generate test reports.
- Perform delta Code coverage testing, analysis and generate analysis report.
- PR/document/Do178B reviews

Project	**EFIS-II – Verification/Offshore**
Client	CHELTON Flight Systems, USA
Software/Tool	C++, RTRT, Understand C/C++
Duration	Mar 2007 to Oct 2007

Responsibilities:
- Development of DO-178B Level A requirements tests and supplemental structural tests.
- Develop Requirements-Based tests.
- Providing hand analysis and reports, if needed, for structural coverage and MCDC.
- Collaboration with Chelton to determine test coverage, as well as the analysis of coverage against previously executed tests using RTRT.
- Provide assistance with test reviews as coordinated by Chelton.
- Develop RTRT tests to augment Requirements tests and to achieve appropriate Level A structural coverage.

Project	**FTCS FDS – Development/Onsite/Offshore**
Client	BOEING, USA
Software/Tool	C, DDD, Red Hat Linux, Bugzilla, RTRT, PVCS Dimensions
Duration	Oct 2004 to Feb 2007

Responsibilities:
- Perform requirement capture for new features.
- Develop High level requirement document
- Performing Low Level design (LLD)
- Correction of Design after approved by the customer and defects encountered
- Performing coding based on Design
- Code Inspection with respect to Software coding standards
- Functional and structural testing
- Defect reporting through log sheets
- Correction of code after approved by the customer based on detailed design and defects encountered