Pooja Bala Singh

Senior Engineer, Firmware Testing

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SKILLS

Programming Language: Python, C++, Embedded C, SQL

CI/CD: Git, Gerrit, Jenkins, TFS, ADO

Software Tools Used: PyCharm, Spyder, Testrail, JIRA, SOAP UI, ActiveMQ

Framework: Pytest

OS: Windows, Linux

EDUCATION

Aug 2009 to Jun 2013

B. Tech. in Information Technology
Grade: 81.09%
Orissa Engineering College, Odisha

Jul 2006 to May 2008

Intermediate School (10+2)
Grade: 71.8%
BISSS, Bokaro, Jharkhand

Apr 2005 to Jun 2006

High School (10th)
Grade: 76.8%
SSVM, Bijupara, Jharkhand

CERTIFICATIONS

- Certified Green Belt (Six Sigma) from Honeywell
- Completed the Aero Verification and Validation Academy Training.

WORK SUMMARY

Total work experience: Eight Plus Years

Landis+Gyr: Senior Engineer, Firmware Testing from 23-Feb-2020 to 01-Sep-2023

Boeing: Software Engineer from 03-Sep-2018 to 20-Feb-2020

Honeywell Technology Solution lab: Software Engineer from 14-Dec-2015 to 17-Aug-2018

Honeywell Technology Solution lab: Software Engineer (Contractor) from 15-Mar-2015 to 12-Dec-2015

Safran Engineering Services India Pvt Ltd: Software Engineer (Contractor) from 15-Sep-2014 to 27-Feb-2015

Tata Consultancy Services Ltd: Assistant System Engineer from 15-Feb-2014 to 04-Jun-2014

EMPLOYMENT SUMMARY

- Having 7+ Years of experience in RTOS, Python (Python APIs – Pytest, Beautiful Soup, LXML, pandas, numpy, requests and re), Embedded C/C++ Development and Testing in Avionics and metering (E360LTE) Domain.
- Comfortable on working with MS Visual Studio, Gitlab, Git, Jenkins, Code Test, PyCharm, Jira, TFS, SVN, Doors, Vector Cast and Source Insight.
- Proficient in Preparation automated and manual test Scripting Test Plans, Procedures and Result Summary for HLR and LLR using python.
- Sound knowledge of DO-178B/C and DO330 standard.
- Analyze and customize the complicated software system and design a strategy to test the system.
- Created and managed RTM and Sprint Backlog to facilitate end-to-end requirement tracking.
- Proficient in basic Linux commands, including:
  -Navigation (cd, pwd, etc), File Management(mkdir,rm,cp,mv)
  -Text editing, system information, process management, File Permissions.
- Familiarity with RESTful API (Using requests library)

WORK EXPERIENCE

Project: **E360LTE meter (1ph and 3ph)**

Description: With its new smart push functionality, the E360 has an intelligent way of sending data from the meter to the Head End System. This ability improves the performance of the device on various levels: It enables the delivery of near real-time data for more accurate and granular power flow calculations.

The key job responsibilities performed under this role are-

- Worked on agile methodology.
- Led end-to-end testing and validation of firmware for commercial and household smart meters.
- Authored test plan and test scenarios for a given user story and specification (Created both automated and manual tests and maintain existing test suits)
- Validated of test script and coverage of a particular feature and delivering high-quality, bug-free software..
- Collaborated on functional specifications per COSEM and DLMS standards to meet customer requirements.
- Created test automation using test simulators (Automation test system e.g., ATM/PATS), developed by Landis+Gyr, Firmware Upgrade over the air through LTE.
- Performed Debugging and analyzing the test scripts.
- Driving continuous improvement in test coverage and test effectiveness.

Tool and Technology used: Automation test system, python scripting, Gerrit, JIRA, TFS (Azure Devops), Jenkins, windows

Project: **Boeing Flight Management System**

Description: Software Integrated Test Environment (SITE) is a multi-function test environment for FMS Data link. It enables HW/SW integration testing (using real HW or a VM), SW integration testing, and low-level testing. SITE also provides VM that simulates hardware to run the flight software (FMS Data link) and can be used to run many of the verification tests used for the flight software certification. It supports Aeronautical Radio Incorporated (ARINC), Airline Operational Communications (AOC), Future Airspace Navigation Systems (FANS) and Air Traffic Control (ATC) communication.

The key job responsibilities performed under this role are-

- Involved in all stages of STLC life cycle.
- Involved in development of python wrapper functions which used for different types of Data link (Air traffic Control, Airline Operation Control etc.).
- Developed the module using python data structure (list, dict, tuple and set) which helps the team to develop their own module easily which reduced the sprint lifecycle time.
- Validated the logging and printing function of tool using Python API's Beautiful Soup and xml.
- Created test cases during two-week sprints using agile methodology and pytest API.
- Involved in Peer reviews for design and codeof python and requirements.
- Involved in Regression Analysis and Sprint plan development.
- Managed a small team of programmers using a modified version of the agile development.

Tool and Technology used: PyCharm, Windows, GIT, JIRA, SmartBear Review Tool, Python, MySQL

Project: **Electronic Chart**

Description: Cockpit display system consists of an air Data computer which processes information from multiple sensors. The primary display in the cockpit is positioned in the front of the pilot and redundant display driver electronic will be available. This will enable real time display of the Navigation, Engine Management Parameters, and a multifunction display of flight parameter on moving Map: Terrain, radar, warning, anti-collision system, traffic control and alert system etc.

The key job responsibilities performed under this role are-

- Involved in all stages of SDLC life cycle.
- Involved in verification and validation of primary flight display (PFD) and multi-function display (MFD).
- Involved in preparation of Test scenarios and execution on Hardware benches.
- Involved in Regression Analysis and Test plan development.

Tool and Technology used: C++, Python, DEOS, PVCS, Code Test Tool, JIRA

Project: **GulfStream650(Block point 3)**

Description: This is the feature update for G650 aircraft, update includes SVS on PFD in full screen and two third screen mode.

The key job responsibilities performed under this role are-

- Involved in all stages of SDLC life cycle.
- Involved in development of primary flight display (PFD) and multi-function display (MFD).
- Involved in preparation of Test scenarios and execution on Hardware benches.
- Involved in Peer reviews for design and code.
- Involved in Regression Analysis and Test plan development.
- Involved in Structural Coverage of Source Code using Vector Cast and Code Test tool.

Tool and Technology used: C++, DEOS, TIU Server, TIU Client, PVCS, Vector Cast, JIRA, SVN, GTS

AWARDS & RECOGNITIONS

- Honeywell Q1 2018 VPD Award (Silver) - G650 BP3
- Honeywell Q2 2017 Test-A-Thon (Bronze)
- Exceptional Teamwork Demonstration & Collaboration - E-Chart (Bronze)