REJINA C M

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# Objective

Seeking a challenging position in Avionics Domain where my knowledge skills and strengths in Software Development and Testing can be shared and get enriched in conjunction with company’s goals and objectives.

# Technical Proficiency

* Overall **5 years and 5 months** of work experience in development and testing.
* Currently working as **Software Test Engineer** in HAL-Edgewood Technologies Private Limited from **Oct 3rd 2008 to till date**.
* Experience in Software Development to the stds of **DO-178B**, Scripting and System Testing through Automated Test Equipment using **Python**.
* Developed an OS independent protocol, User friendly Graphical Interface **(GUI)** related to Ethernet, video and communication protocol like RS422, RS232 and Scripting Environment for Discrete I/Os, Analogs, Synchros and MIL 155B.
* Hands on experience in **C**, **Python** and **VB** and software debugging.

# Technical Skills

* Programming Languages

C, VB.NET, XML

* Scripting Languages’

Python

* IDEs

Visual Studio, IDLE

* Standards/Protocols

MIL 1553B, RS232, RS422

* OSs

Windows

# Projects Undertaken

**OSAMC (Open System Architecture Mission Computer)**: OSAMC is the nerve center of avionics system, controls all the sensors placed in the avionics network and performs the navigation and weapon guidance. The hardware is based on VITA46 backplane with PCIe running on VxWorks 653 with MPC8640 Power PC of various functions like MIL1553, VIDEO, STROKE, Ethernet, USB, RS422, RS232, discrete interface, analog and synchro Interface.

**Client**: HAL

**Responsibilities**:

* **Script Interface using Python**

**Overview:** A user interface is developed so as to carry out automated testing of various interfaces of OSAMC. Different interfaces hold a set of script modules which in turn uses the APIs of the scripting interface. The script interface will be internally interacting with the application software through Ethernet which is accomplished through socket programming. Information related to OSAMC interface is fed in an XML file which will be parsed using DOM parser. Built-in objects and Standard Library modules of Python are made use of in the implementation.

**Language : Python**

**Role :**

* Was responsible for the development and testing of the interface.
* Preparation of technical requirements and design requirements.
* Debugging of the software.
* **Automated Testing using Python**

**Overview:** Automated Test Equipment gives a simulated environment through which OSAMC is testable. System level testing is carried out in which inputs are given and expected outputs are checked. Simulated and monitored environment is achieved through a UI. Scripting environment is provided as to do automated way of testing of Discretes, Analogs, Sychros and MIL 1553B, developed variable user interfaces like TCP/IP, RS422 & RS232, Ethernet. Pass/fail test report is generated for each interface test.

**Language : Python**

**Role :**

* Design and development of scripts in python along with the script interface.
* Preparation of technical requirements and design requirements
* Debugging of the code.
* **User Interface GUI:**

**Overview:** The GUI is a front end interface to the user to test the different interfaces like Ethernet, video, Discrete I/Os, analogs, RS422 & RS232, MIL 1553B of OSAMC. The GUI internally interacts with the application software developed using C, data is transmitted through the Ethernet, the pass criteria is decided by GUI interface and automated report is generated. The GUI holds both automated as well as manual way of testing.

**Language : Visual Basic**

**Role :**

* Defined and derived the requirements for the user friendly GUI to test all the interfaces of the OSAMC used for Jaguar DARIN-III aircraft.
* Involved in the Design & development of the GUI, for testing of the OSAMC.
* Developed the GUI interfaces for various communication protocol like MIL-std 1553B, RS422 & RS232 using VB.Net.
* Analyzed these by testing and required changes has been carried out in the software.
* Preparation of the User Manual for the User Interface GUI.
* **Application software Development**

**Overview:** The application software is the top-most layer which is developed so as to test the interfaces of OSAMC by calling the driver APIs which will be interacting with the hardware layer.

**Language: C**

**Role :**

* + Developer of the Application software.
  + Defined and derived the requirements and design for the same.
  + Finalized how the entire module should be modularized.
  + Preparation of the requirement document and design document.
  + Completion of coding and testing.
  + Debugging of the code.

# Education

* Bachelor Degree in Computer Science & Engg. from College of Engg Thalassery, Kerala under CUSAT in 2007 with 64%.
* 12th in Computer Science from St. Josephs Higher Secondary School, Thalassery, Kerala in 2003 with 72%.
* 10th in 2001 from Sacred Hearts Girls High School, Thalassery, Kerala with 83%.

# Personal Details

* Father’s Name : A C Ravindran
* Date of Birth : 21/11/1985
* Gender : Female
* Nationality : Indian

# Declaration

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

Place: Bangalore (Rejina C M)