

**Industry** - Automotive    **Module** - Cluster    **Clients** - General Motor    **Platform/OS** - Windows, Linux

## OBJECTIVE

4+ years of total industrial experience and 3.8 years of experience in Automotive HMI development. Involved in the complete Software life cycle of new product development. Experience in developing Embedded based Applications involving C++ and QT5.11.2.

## SKILLS

### Technical Skills:

#### Programming Languages



C, C++, HMI

**Concepts:** Object-oriented programming (OOPs), STL, Multithreading, UML, Design Patterns

**Development Environment**  
IBM Rational Rhapsody, Altia Design tool, Qt Creator, QNX momentics, HMI designer tool, Visual studio.

**Version Control**  
GIT, Bit bucket, Source tree, VSS2005, Tortoise SVN, Jira

**Methodologies:** Scrum, Agile

### Soft Skills:

- Positive attitude
- Resilience
- Willingness to learn
- Team Work

## PROFESSIONAL EXPERIENCE

### People Tech Group @ India Software Engineer • DEC-2020 – PRESENT

#### Roles and responsibilities:

- I have 4 Years of Hands-on experience in C/C++/QT 5.11.2
- Requirement analysis and design a software solution based on client requirements.
- Design and Development of multiple cluster features for ICE and BEV vehicles using C++, IBM rational rhapsody and Altia Design tool.
- Creating a simulation of the service so that developed module can be tested on simulation if the hardware is unavailable.
- Taking ownership of assigned task that are part of new feature development and enhancement activities. Resolving issues related to both HMI and APIs by having discussions with respective teams at client's end. Unit testing with G-Test Framework in writing OOPS concepts like Abstraction, Inheritance, Compile Time/Run- Time Polymorphisms.
- Hands-on experience in writing Generic Code using Template Functions and Template classes, and using the STL Containers like Vector, List, Stack, Queue and Associate containers Map, Multimap, Set and Multiset data structures.
- Knowing implementing design patterns like Singleton, Observer, Bridge, Class Factories, and Algorithms like binary search and Quicksort.
- Worked with Inter-Process Communication using Windows IPC, Sockets and Component Object Model Inproc/Outproc server.
- Have basic knowledge of Healthcare & Banking domains.

### Mphasis @ India Software Developer • MAR-2018 – NOV-2020

#### Roles and responsibilities:

- Hands-on experience in developing Windows OS-base GUI applications using Modal/Modeless dialogue boxes and Doc/View architecture-based SDI/MDI applications
- Knowing implementing design patterns like Singleton, Observer, Bridge, Class Factories, and Algorithms like binary search and Quicksort.
- Fixing of bugs found in various stages of testing.

## EDUCATION

### **M-Tech • July 2018 • STE College of Engineering (C.S.E)**

- Post Graduate (P.G) with an overall aggregate of 79.9%.

### **B-Tech • April 2016 • SMGG College of Engineering (C.S.E)**

- Graduated with an overall aggregate of 69.66%

## PROJECTS

### HMI Development for instrument cluster (11/2020 - Present)

- **Client:** General Motors.
- **Industry:** Automotive.
- **Summary:** This project involved development of HMI for an In-vehicle Cluster System. The HMI was developed from scratch as per the requirements provided by the client (General Motors). The project was composed of several modules like, RHMI, Driver Assistance etc.
- **Environment:** Qt 5.11 IDE, C++, IBM Rational Rhapsody, ODI Tool, HMIC designer tool, QNX momentics, Altia renderer and Altia design tool.

#### Development Activities:

- ✓ XML development as per the UI requirements.
- ✓ Rhapsody UML modeling for screen Transition Logic.
- ✓ Writing C++ code for cluster features (i.e. Gauges, info pages, alerts, telltales) development in Qt Creator tool.
- ✓ Binding the C++ code with the XML Widgets With the help of HMIC designer tool.
- ✓ Developing code to Handle CAN/LIN (5-way switch) or touch input to Display different features on altia renderer.
- ✓ Implementation of 3D startup and shutdown (SUSD) animations for the cluster HMI.
- ✓ Writing the Unit test cases with the google test framework.
- ✓ Static code analysis.
- ✓ Fixing of bugs found in various stages of testing.

### Startup and Shutdown Animations and Welcome for Entry Application /HUD HMI Development (08/2021 - Present)

- **Client:** General Motors.
- **Industry:** Automotive.
- **Summary:** This Project involved the development of HMI for the heads up display Features. Here we developed the user controls for changing the size, brightness, rotation of HUD display Projection on the car windshield. And developed the Features such as speed gauge, telltales, map maneuvers.
- **Environment:** Qt 5.11 IDE, C++, IBM Rational Rhapsody, HMIC designer tool, QNX momentics, Altia renderer and Altia design tool.

#### Development Activities:

- ✓ Understanding the API calls to the middleware/hardware developed by client and Developing the C++ code for the HUD features (i.e. Speed limit indicator, map maneuvers, Digital speed, etc.).
- ✓ Design and Development of State Chart, Structure, Object Model, Class Diagrams for Screen Transition Logic, Component Communication logic respectively.
- ✓ Implementation of Hud controls the logic to modify the Hud brightness, Hud rotation/orientation, and hud Projection Size by getting the touch input from the infotainment system.
- ✓ Gerrit Build & PA Integration HMI Development
- ✓ Implementing the Welcome animation and startup and Shutdowns applications
- ✓ Implementing the Altia Integration
- ✓ Have basic knowledge of Jenkins Jobs
- ✓ Involved in bug fixes as well as enhancements to the project.

### SUBSYSTEM SIG (ECG) MFC/C++ Development (03/2018 to 11/2020)

- **Client:** John F Welch Technology United States.
- **Industry:** Health Care
- **Summary:** Cardio Soft provides physicians with the most reliable information available to support cardiac diagnostic decisions. The subsystem SIG has an interface to the data acquisition (ADC) driver and interface to application software
- **Environment:** C/C++, VC++, MFC, Windows XP, SQL Server 2008&12 Visual Studio 2015&17

#### Development Activities:

- ✓ Having good experience in Front end design UI's using Modal/Modeless dialog boxes on Windows using Visual C++. Developing Single Document Interfaces (SDI) and Multiple Document Interfaces (MDI) Applications using MFC Doc/View Architecture.
- ✓ Hands on experience on MFC Sub- classing, MFC Custom Controls such as List Controls, Static Controls, extensive knowledge in Windows Message Map architecture and Message handling mechanism in Win32 and Microsoft Foundation Class (MFC) library.

**Declaration:** I consider myself familiar with Information Technology aspects. I am also confident of my ability to work in a team. I hereby declare that the information furnished above is true to the best of my knowledge.

Siva Krishna