Chalama Reddy Challa

Summary:

Embedded Software Engineer/Developer having **4+ years** of background in **C, C++, C#, Python, STL** programming languages and **HMI(GUI)** programming using **QT/QML** in automotive and color measurement domain

- Experience in embedded devices, systems and software applications using **C, C++, C#, Python**
- Be involved in all phases of product development processes from requirements definition to production release and worked under agile/scrum process
- Having work experience on **Linux** platform and **QNX RTOS** for application development and integration
- Working experience in Configuration Management Tools like **GIT**, **PTC Integrity, Azure DevOps**
- Possess strong communication, relationship management, analytical and problem-solving skills
- Knowledge on both **Agile** and **V-model** methodologies
- Having work experience on **Autosar** and **CAN stack integration** for software components in **IVI**
- Experience on **Android** platform framework with design and implement different software modules for IVI
- Having knowledge and experience on **ARM** processor design and microcontroller architectures
- Worked on **kernel bootloaders** and automotive **diagnostic services** like **UDS** and integration
- Having experience on Debugging tools like **GDB, JTAG** in both windows and linux kernel development
- Experienced in design documentation for creating and existing SW components
- Having Knowledge on Software testing like module and integration testing with **CANOe** and **CANALYZER** tool

## *Skills:*

- **Languages**: C, C++, C#, Python
- **Scripting Languages**: Python, Shell, Java
- **Operating Systems**:  Windows, Linux, QNX(RTOS)
- **Development Tools**: QT creator, Eclipse IDE, Visual Studio 6.0, Android
- **Standards**: AUTOSAR
- **Configuration Tools**: PTC Integrity, Azure DevOps, GIT, JIRA
- **Software Methodologies**: Agile, V-model
- **Protocols**: CAN, LIN, I2C, SPI, RS232
- **Testing Tools**: CANoe, CANALYZER

## *Work Experience:*

**Title:** <mark>UI Development for Color Matching and Measurement Products</mark>

**Employer:**  IBTI

**Client/Organization:**  X-RITE PANTONE – Grand Rapids, MI

**Duration:**  Oct 2020 - Present

**Job Position:**  Embedded Software/Application Developer – REMOTE

**Responsibilities:**

- This project is based on manufacturing instruments with more accurate and consistent color measurement on the market for Industries like Print and Packaging, film, Paper, Automotive and Consumer Electronic Appliances
- As an Application **UI** developer I am responsible for developing applications for Color matching, measurement and color quality control products like **Spectrophotometer**, **Densitometer** and **Colorimeter**
- Implementing **QML** applications for modules like Ink, Press or Job, Library and Job manager, Autopatch, NetProfiler and Settings (Color, Function and Instrument) based on design specification and framework in abstract we get from NextPoint design team
- Working on **QT/C++** backend development by keeping frontend QML files into and integrate them to a single JSON file
- Also working on validate the color of CMYK and spot color measurement

**Title:** <mark>**Climate HMI development for IVI (In-Vehicle Infotainment)**</mark>

**Employer/Client:** INSICLOUD INC. – Princeton, NJ

**Duration:** June 2020 - Sep 2020

**Job Position:** Embedded Software Engineer - REMOTE

**Responsibilities:**

- This project's Business logic and HMI logic are developed for Climate domain and this project is based on genivi's Open Infotainment platform
- The climate sub domain has climate related functionalities i.e.**AC activation/deactivation**, **Temperature** control, **Air flow** control, **Body position** control, Driver massage activation, Air quality control and rear AC activation/deactivation
- Implemented the HMI Framework using **QT/C++**, implemented the Business Logic layer that receives data over QT DBUS and processes the same push to HMI written in QT
- **HMI** development and Vehicle interface Middle layer development for different infotainment vehicle
- Identified emerging HMI technologies, establishing relationships with key vendors, and prototyping and refining new interactive experiences

**Title:** <mark>**RIM and IMM modules development for forklift trucks**</mark>

**Employer:** L&T Technology Services Limited

**Client/Organization:** CROWN- New Bremen, OH

**Duration:** Dec 2019 - May 2020

**Job Position:** Embedded Software Engineer

**Responsibilities:**

- As an Embedded Software Engineer my responsibility is to support Cellular Module (CRM) in RIM (Radio interface module) application code to check different types of AT commands to work with multitech connection manager
- RIM is connected to PC through Ethernet cable to operate those commands in Linux terminal as well as through shell script
- Working on IMM (Information management module) connected to RIM through Ethernet and loading test code into SD card and Debrick image files on IMM hardware

- Disabling **Bluetooth** in RIM application code using **C++**
- Working on copying Kernel, U-boot and root file system image files to Micro SD card and then test it on RIM code
- Also worked on Connectivity, **Navigation**, **Wi-fi** and **USB** software modules with **TCP/IP** networking service protocols

**Title:** HMI Development for Instrument Cluster Graphics

**Employer:** Technosquare Inc.

**Client/Organization:** DENSO- Southfield, MI

**Duration:** June 2018- Nov 2019

**Job Position:** Embedded Software Developer

**Responsibilities:**

- As an Embedded **HMI** Software Developer my responsibility is for creation and extension of the existing HMI application components and frameworks
- Assist in design data, develop and implementation of embedded software devices and systems
- Create and maintain component documentation such as a high level, low level designs, Software requirements and screen transition
- Designing graphical PSD's using Adobe Photoshop CC tool and exporting them into QML files using Trito linkage tool and development in **QT/QML** framework written in **C++**
- Involving and supporting in HMI control using Eclipse IDE based RBA (Rule Based Arbitrator)
- While developing software application also involves in PC simulation of each individual component and integrate them into a software application for flashing on target hardware with **QNX (RTOS)**

**Title:** Product IVI (In-Vehicle Infotainment) – After-Market

**Client/Organization:** Fossilshale Embedded Technologies Pvt. ltd - India

**Duration:** June 2014- May 2016

**Job Position:** Embedded Software Engineer

**Responsibilities**

- Development of **HMI** and business logic using **QT/QML** framework using **C++** for Home screen, Multimedia i.e. Radio, Camera, Audio, Video, Media Player
- Development of HMI and business logic for Bluetooth, USB, Wi-Fi, Navigation
- Also worked on some ADAS development with **C++11** standard features
- Working on configuration of **Autosar DCM module** for diagnostic communication
- Experience on working with Android software development tool for design and development of audio, media player components
- Experience on Autosar and CMMI behavioural model with **CAN stack** diagnostic integration
- Working on Hardware abstraction layer **(HAL)** for audio and media player devices
- Accessing device drivers in **MCAL** peripheral interfaces for different modules and components
- Experience on **Bluetooth** protocol stack called Bluez for **Linux** in vehicle infotainment
- Experience on working with classic Bluetooth and **BLE** (Bluetooth Low Energy) devices through RFCOMM, HCI, OBEX and ATT protocols using profiles like SPP, SDAP and GATT

Chalama Reddy Challa

*Education:*

Bachelor's in Electronics and Communication Engineering from Vignan University, Guntur, India
Aug 2010- May 2014
Master's in Electrical Engineering from University of Missouri- Kansas City (UMKC), Missouri
Aug 2016- May 2018

# Chalama Challa

- Piqua, OH, USA

## Contact Information

- ga2-ljx-x8z@mail.dice.com (Preferred)

- 3159080399 (Preferred)

## Work History

**Total Work Experience: 6 years**

- **Embedded Software Developer | Technosquare Inc**
  Jun 01, 2018 - Nov 01, 2019 | Southfield MI United States

- **Embedded Software Engineer | L&T Technology Services Limited**
  Dec 01, 2019 - May 01, 2019 | New Bremen OH United States

- **Embedded Software Engineer | Fossilshale Embedded Technologies Pvt. ltd**
  Jun 01, 2014 - May 01, 2016 | India

## Skills

- **c++** | 6yrs | 2021
- **embedded software** | 6yrs | 2021
- **hmi** | 6yrs | 2021
- **framework** | 5yrs | 2021
- **software** | 3yrs | 2021
- **software development** | 2yrs | 2021
- **embedded systems** | 1yrs | 2020
- **i2c** | 1yrs | 2020
- **qnx** | 1yrs | 2020
- **rtos** | 1yrs | 2020
- **engineering** | 4yrs | 2019
- **hardware** | 4yrs | 2019
- **linux** | 3yrs | 2019

- **qt** | 3yrs | 2019
- **usb** | 3yrs | 2019
- **wireless** | 3yrs | 2019
- **bluetooth** | 3yrs | 2019
- **qml** | 3yrs | 2019
- **dcm** | 2yrs | 2016
- **device drivers** | 2yrs | 2016
- **interfaces** | 2yrs | 2016
- **linux kernel** | 2yrs | 2016
- **multimedia** | 2yrs | 2016
- **scripting** | 2yrs | 2016
- **android** | 2yrs | 2016
- **audio** | 2yrs | 2016
- **audiovisual** | 2yrs | 2016
- **autosar** | 2yrs | 2016
- **configuration** | 2yrs | 2016
- **energy** | 2yrs | 2016
- **hci** | 2yrs | 2016
- **radio** | 2yrs | 2016
- **shell** | 2yrs | 2016
- **video** | 2yrs | 2016

# Work Preferences

- Likely to Switch: Most Likely
- Willing to Relocate: Yes
- Work Authorization:
    - US
- Work Documents:
    - Employment Auth Document
- Security Clearance: No
- Third Party: Yes
- Employment Type:
    - Contract - Corp-to-Corp
    - Contract to Hire - Corp-to-Corp

# Profile Sources

- Dice:
  https://www.dice.com/employer/talent/profile/fbf730e25b0a8350c33fb708cb0b73c57de8
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