

AMITKUMAR VAGHELA

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Professional Experience:

Name Of Company	Designation	Period
e-Infochips - An Arrow company, Ahmedabad	Technical Lead	Nov 2017 – Till Date
Aricent Technologies (Holdings) Ltd, Bangalore	Senior Embedded Engineer	Feb 2016 – Aug 2017
PathPartner Technologies, Ahmedabad	Senior Embedded Engineer	May 2015 – Feb 2016
e-Infochips Ltd., Ahmedabad	Embedded Engineer	Sept 2011 – Apr 2015

Area of Expertise:

- 8+ years of experience on Linux BSP and Android BSP.
- Experience in C and C++11
- Very good understanding of object oriented programming system (OOPS)
- Working experience in Python and shell scripting
- Experience in multi threaded and inter process communication (IPC) application development in Linux and Android.
- Expertise in boot loader porting for embedded platform in Android and Linux
- Experience in Linux device driver development.
- Strong in fundamentals of Operating System Concepts, System Architecture
- Experience with Android binder and Android Native applications.
- Well versed on USB, I2C and UART protocols.
- Experience in TI's digital media soc like DM365, DM6446
- Experience in Qualcomm's processors like APQ8098, APQ8096
- Experience in Real time video streaming application development using RTSP.
- Debugging & bug fixing in linux driver, application crash, Core dump analysis.
- Expert to fix intermittent issue and develop a stable system

Technical Proficiency:

Domains of work:	Medical devices, consumer electronics, retail industry
Microcontrollers	8051, PIC, ARM
Microprocessors	DM365, DM6446, APQ8096(SD 820), APQ8098(SD835), SD855
Operating System	Linux, Android, QNX RTOS
Programming Languages	C, C++11
Scripting Languages	python , Linux shell.
Development Tools	klockwork, cpptest, Qt SDK
Testing tools	pytest, UnitTest++, Jenkins
Debugging Tools	Oscilloscope, Wireshark, gdb, valgrind
Version Control	Git, Gerrit, CVS, SVN
Project monitor tool	Jira, Microsoft Project Plan, redmine

Soft skill Proficiency:

- Highly skilled to understand the requirements and design the system
- Experience working with Agile and scrum.
- Plan task and product release according to defined milestones
- Ability to learn new concepts
- Manage a small team and mentor juniors
- Maintaining all reports related to projects & Quality Control related documents.
- Technical suggestions for atomization & process innovations for various projects.

Experience Details:**My Current Job Involve (e-Infochips - An Arrow company)**

- Working on Bluetooth speakers and ear-buds
- Working on ALSA framework and Bluetooth profiles
- C/C++11 applications and python automation
- Unit testing, Integration testing & providing support
- Manage team and assign task accordingly.

Project 1 :

Project Name	Mobile Hotspot 5G
Duration	14 months
Client	Network router product company
Technologies used	C, C++, Linux, Android, LCD, proximity loop, battery interface, Firmware upgrade, wifi
Description	<p>The client required the following :</p> <ul style="list-style-type: none">• Android BSP support for mobile hotspot device based on SM8150 and SDX50• Production test utility• FOTA for firmware upgrade
Role	<ul style="list-style-type: none">• Custom Board bring up• Added support for LCD in boot-loader and kernel• Added driver support of proximity sensor, firmware upgrade, Battery and power management• Added support for fan for temperature control• Customization for wifi module• Develop production testing utility• Fix customer facing issues• Customer communication for status reporting and overall progress• Plan customer release• Assign task to team members and monitor progress• Manage documents according n to CMMI level 3 process
Challenges	<ul style="list-style-type: none">• Fixed the issues which are hard to reproduce.• Battery thermal testing• Fix field issues

Project 2 :

Project Name	Barcode Scanner Framework
Duration	18 months
Client	Zebra Technologies
Technologies used	C, C++, Java, Linux, Android, scanning technology, camera, bluetooth
Description	<p>The client required the following :</p> <ul style="list-style-type: none">• Mobile computing device which support different barcode scan engines.• Add feature depending on Platform.
Role	<ul style="list-style-type: none">• Add support for new platform and new features for different products.• Develop C/C++ application of scanner framework for Android• Develop upgrade package for android of scanner application• Fix customer issues.
Challenges	<ul style="list-style-type: none">• Fix the issues which are hard to reproduce.• Maintain common framework for different platforms.

Project 3 :

Project Name	Drone
Duration	6 months
Client	Consumer product company
Technologies used	Linux, C and C++ programming, Video, Image, Camera Interface, Shell scripting, web server, video streaming, long range wifi, nand boot
Description	<p>The client required the following :</p> <ul style="list-style-type: none">• Flight control of drone• Video streaming• On the Air firmware upgrade• Capture meta data and store in video file
Role	<ul style="list-style-type: none">• Develop different Linux daemons on DM365 platform to drive the drone• Design overall message passing mechanism to process different user commands.• Prepare module testing utility• Support for over the air upgrade
Challenges	<ul style="list-style-type: none">• Coordinate with other team and develop code compatible with other team's module.• Develop central controlling unit without base station unit.• Minimize use of open source utility which has GNU GPL license.

Project 4 :

Project Name	Camera Control Unit
Duration	2 Years
Client	VisionScope
Technologies used	Ti's DM365 soc, linux, C and C++ programming, QT GUI, Audio , Video, Image, Database, Camera Interface, Touch panel Interface, LCD, Kernel source modification, Shell scripting.
Description	<p>The client required the following :</p> <ul style="list-style-type: none"> • Audio and video record and storage on HDD. • Image capture and create a report in a pdf file. • E-mail, print features along with pdf file creation. • Separately prepare a hardware diagnostics utility. <p>The product is a device used in medical domain. It is FDA certified in USA. It is used for diagnosis before and after operation.</p>
Role	<ul style="list-style-type: none"> • Add support for new NAND chip • Develop audio and video capture applications. • Develop RTSP streaming support • Extend the GUI fetures in Qt • Plan and provide the releases • Fix boot-loader issues • Develop, Maintain and Modify code for UI and Linux Kernel Source according to client requirements. • Prepare and Maintain Release Documents and Manage Versions for Software and Documents. • Perform Functional Testing, Integration Testing and Sanity Testing before Client Release.
Challenges	<ul style="list-style-type: none"> • Control the code flow through UI(Qt API) → Different C applications. • Fix issue which are not reproducible locally.

Project 5 :

Project Name	Eye Tracker
Duration	8 months
Client	Oculogica
Technologies used	QNX RTOS, C and C++ programming, QT GUI, Video, Image, Database, Camera Interface, Shell scripting, cloud
Description	<p>The client required the following :</p> <ul style="list-style-type: none"> • Play Video on two different monitors. • Record the tracking data of patient's eye. • Create graph from the EDF file. • Upload the patient data to cloud. <p>The product is a device used in medical domain. It is FDA certified in USA. The device is HIPAA compliant.</p>

Role	<ul style="list-style-type: none"> • Design high level architecture • Perform a POC of different modules • Prepare a wire frame for GUI • Develop GUI in Qt • Customer communication • Plan overall milestone and product delivery
Challenges	<ul style="list-style-type: none"> • Control the code flow through UI(Qt API) → Different C applications and libraries. • Play one video on two different displays. • Plot the real-time graph.

Project 6 :

Project Name	Intel Galileo ip
Duration	4 months
Client	IP
Technologies used	IOT (Internet of things), C programming, Linux, Sensor for diagnosis in medical domain.
Description	<p>The client required the following :</p> <ul style="list-style-type: none"> • Explore and study the Intel Galileo board. • Develop new ip ideas to do efficient use of board.
Role	<ul style="list-style-type: none"> • Understand Yocto build system. • Understand BSP of Intel Galileo board. • Understanding of High Level Architecture, Use Cases and other specific documents like user manual and others according to Standards. • Prepare a demo application for the Intel Galileo board. • Simulate the sensor and data to create a prototype • Suggest possible solutions to team mates.
Challenges	<ul style="list-style-type: none"> • Collaborate with different people for ip ideas and scope of work. • Efficient use of Galileo board.

Achievements:

- Awarded for Best Team for successful project execution
- Successfully completed soft skill development training named **LAGAN** at eInfochips.
- Participated in “ROBOTICS” at C.U.Shah college of engineering in 3rd Sem of BE.

Educational Qualification:

- Bachelor of Engineering in Electronics and Communication Engineering, Gujarat University, India, July 2011 **Percentage: 67.61 %**
- Higher Secondary Certificate Examination(Gujarat State Board), *March 2007* **PCM(Science) Percentage : 69.80%**
- Secondary School Certificate Examination(Gujarat State Board), *March 2005* : **Percentage : 78.00%**

Personal Detail:

Full Name	Vaghela Amitkumar Motilal
Birth Date	10 th Dec 1989
Sex	Male
Marital Status	Married
Nationality	Indian
Languages Known	English, Hindi and Gujarati.
Current location	Bangalore
Permanent Address	A-76, Haridham society, Nr. Parshwanath township, New Naroda, Ahmedabad – 382345.

DECLARATION

I hereby affirm that all the above information is true to the best of my knowledge and I assure herewith that given a chance, I will prove my skills and be a part of your company's growth.

Place :- Ahmedabad

Date:

Amitkumar Vaghela