

Vishal Vishal

Curriculum Vitae

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Profile Summary

An accomplished software developer with 5.2 years of experience in the field of embedded and real time critical software systems using C/C++ as high-level languages. Expertise includes software development using OOP/OOAD, data structures, design patterns, and SDLC techniques, implementing and improving complex work flows in a time critical environment, enhancing the code quality for optimization and robustness and in-depth knowledge of AGILE scrum based methodology. Highly motivated to work in a team or a self managed project.

Technical Skills

Programming Languages C, C++ (with STL and Boost), Python
Tools Jenkins, Jira, Git, CMake, GDB, CANUtils
Frameworks ZMQ, Protobuf, GoogleTest, GMock
OS Platforms Linux, QNX
Automation Framework Sikuli, Robotium, Appium
IDEs Visual Studio, Eclipse, QtCreator
Protocols TCP/IP, CAN, RS232, RS485

Experience

- Jan-2016– **Software Developer(Embedded)**, ROCHE, Stuttgart.
- Present
- Developed and maintained driver for Motion control boards based on CANopen.
 - Created a micro-service to use the motion control boards as part for a real-time development framework for medical devices.
 - Implemented complex work flows in medical devices for lab automation.
 - Responsible for testing the code quality and reviews.
- Aug-2015– **Junior Researcher(Student)**, FRAUNHOFER SIT, Darmstadt.
- Oct-2015
- Explored the area of software obfuscation specifically for Java, JavaScript, and Python.
 - Implemented a new obfuscator(**Java**) by combining existing obfuscators and evaluated it against the existed techniques for a research project.

- Aug-2014– **Software Test Engineer(Student)**, DEUTSCHE TELEKOM, Darmstadt.
 Aug 2015
- o Developed a model based(using PyModel) test suit framework for mobile handheld devices like e-reader, tablets and mobile phones using the Sikuli framework.
 - o Writing test cases using **Roboium** and **Appium** interface.
 - o Indulge in manual testing and reporting bugs on Redmine for Android applications and e-reader devices
- Aug-2014– **Junior Research Assistant(Student)**, TECHNICAL UNIVERSITY DARMSTADT, Darmstadt.
 Aug 2015
- o Investigated supervised and unsupervised learning techniques using semantic analysis to develop an algorithm for finding a coherent set of documents.
 - o Implemented a clustering technique for initial filtering of documents from a large corpus(New YorkTimes data-set).
 - o Implementing existing approaches and real user evaluation.
 - o Enhanced existing algorithm for document semantic matching using **NLP** techniques.
- Aug-2012– **Lead Engineer**, SAMSUNG, Bangalore (India).
 Sep2013
- o Real Time WiFi Traffic Generator
 - Explored the various traffic modeling parameters for the different type of video streaming traffic.
 - Involved in research and scope estimation of the project.
 - Implemented algorithm for parsing raw packets flowing on the networks in **C++**.
 - Responsible for network level communication algorithm for different traffic using sockets library
 - Implemented the software for generating different traffic models for a different parameter.
 - Ensured the software quality by unit tests and functional testing of the modules.
 - o Test tool development for SIPC conformance
 - Understanding the API to interact with an application processor and the communication processor.
 - Understanding proprietary protocols for Samsung inter-process communication.
 - Ensured the protocol by writing units tests using **JUnit**.
- Mar-2010– **Software Engineer**, SASKEN TELECOMMUNICATION PVT. LTD., Bangalore
 Aug-2012 (India).
- o Windows Multimedia (Video)
 - To perform the unit testing for the fixes.
 - To perform the real time debugging using windows debugger and analysing the logs and finding the root cause for the issue.
 - Development and integration of algorithms to improve the decode times for frames(MPEG-4,H264) in **C++**.
 - Handled issues in video decoder module in windows Media Foundation framework using **C++**.
 - o Audio DSP subsystem on mobile platform - Sustenance and Maintenance
 - Performing Root Cause Analysis (RCA) by analysing the logs obtained during real time use case and fixing the errors raised by various teams during different stages of **SDLC**.
 - Responsible for fixing issues in Audio-Data(amr,mp3,3gp) Processing module in DSP application software written in **C**.
 - Involved test automation using Nokia testing tool ATS3 and AT Commands.
 - Responsible for writing automation scripts in **python** of Nokia head phones.
 - Involved in **Agile** methodology (**Scrum**).
 - Involved in documentation of the call flow and design requirements of automated test tools

Education

2013–2015 **Distributed Software Systems**, Masters of Science, Technical University Darmstadt,Darmstadt(Germany).

2005–2009 **Computer Science and Engineering**, Bachelor of Technology, Kurukshetra University,Kurukshetra(India).

Masters Thesis

Title Storytelling : *Finding the coherence between large set of documents*

Description This thesis explored the domain of **Text Mining** and **Natural Language Processing** to find the most coherent news articles from a large set of NewYork Times corpus.Impelementaion of this thesis is done in **python**. Apache **Solr** server is setup and queried for accessing the dataset.

Packages used : **Python**(nltk, math, os, string, numpy, pulp,time, pysolr, urllib2, json,sklear,scipy)

Languages

Hindi	Mothertongue	
English	Fluent	<i>Fluent</i>
Deutsch	Basic	<i>A2</i>