

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 workflows 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

Roche <i>Software Developer(Embedded)</i>	Stuttgart <i>Jan-2016–Present</i>
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- 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 workflows in medical devices for lab automation.
- Responsible for testing the code quality and reviews.

Fraunhofer SIT <i>Junior Researcher(Student)</i>	Darmstadt <i>Aug-2015–Oct-2016</i>
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- 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.

Deutsche Telekom <i>Software Test Engineer(Student)</i>	Darmstadt <i>Aug-2014–Aug 2015</i>
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- Developed a model based(using PyModel) test suit framework for mobile handheld devices like e-reader, tablets and mobile phones using the Sikuli framework.
- Writing test cases using **Roboium** and **Appium** interface.
- Indulge in manual testing and reporting bugs on Redmine for Android applications and e-reader devices

Technical University Darmstadt
Junior Research Assistant(Student)

Darmstadt
Aug-2014–Aug 2015

- Investigated supervised and unsupervised learning techniques using semantic analysis to develop an algorithm for finding a coherent set of documents.
- Implemented a clustering technique for initial filtering of documents from a large corpus(New YorkTimes data-set).
- Implementing existing approaches and real user evaluation.
- Enhanced existing algorithm for document semantic matching using **NLP** techniques.

Samsung
Lead Engineer

Bangalore (India)
Aug-2012–Sep2013

- 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.
- 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**.

Sasken Telecommunication Pvt. Ltd.
Software Engineer

Bangalore (India)
Mar-2010–Aug-2012

- 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++**.
- 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

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

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

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

Fluent

Deutsch: Basic

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Awards and Presentations

2011: Best Employee award of the quarter

2014: Paper presentation at GI Informatik Tag at HPI, Postdam, Germany

Extracurricular Activities

2014-15: President : Darmastadt Indian Association, Damstadt, Germany

2015-16: Member of advisory committee, Darmastadt Indian Association, Damstadt, Germany