

Harshul Gandhi

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PROFESSIONAL EXPERIENCE

Works Applications, Singapore

R & D Software Engineer (Jan 2016 – Present)

○ **Training:**

- Design and develop a web application to assist daily sales activities of a pharmaceutical organization

○ **Expense Management Application:**

- Working on the development of a Global Expense Application with various complex features
- Brainstorming on new features of the application that would eventually improve UX and increase application's usability
- Design and develop these features in an efficient manner
- Product Quality: Lead a team of 4 developers to improve the overall quality of the product. This involved improving the code quality, efficiency of developers and efficiency of development cycle
- Introduced SonarQube into the project in order to improve code quality

○ **Finance & Strategy Application:**

- Leading a team of 4 members to develop application for managing Journals for accounting team
- Distribute tasks among team members and track progress
- Design and develop critical features to enhance usability of the application

○ **Development Environment Master:**

- Leading a team of 3 to set up and manage a development environment
- Implemented automation to update development environment on a daily basis
- Handled daily queries by cross team developers regarding the environment and helped them debug
- Setting up staging environment using Docker containers and Jenkins as CI tool

○ **Technology Stack:** Java, Spring, Cassandra, Google Closure (JavaScript), Less

ZS Associates, Pune, India

Business Technology Associate (May 2013 – Jul 2014)

- Worked on designing of a salesforce management system that helped our client to improve SFM
- Led a team of 4 to successfully develop, optimize and operationalize one of the key modules for a client
- Took initiative to significantly improve some of the activities done during development such as unit testing, system testing and integration testing
- Interact with client on a regular basis to gather change requests and incorporate that in existing system
- Trained the client on how to use some of the key features of the system
- Training sessions for team mates and new members, on technical and business specifications of the system

Verizon Data Services, Hyderabad, India

Software Engineer (Jun 2012 – Apr 2013)

- Part of the team that was developing a system for Unified Ordering of all the products and services provided by Verizon

PUBLICATIONS AND AWARDS

- **Awards:** Finalist of Singapore Hackathon. Winner of Best One Map Integration award. **Competition:** Hackathon@SG, 25th July 2015.
- **Research Paper Title:** Pixel Area Based Target Distance Estimating and Corresponding Target Hitting Force Calculating Autonomous Robots Using Single Video Device; **Conference:** IEEE, CINTI, Hungary, 2011. [[URL](#)]
- **Research Paper Title:** High Utility and Low-Cost Microcontroller Based Data Acquisition System for Antenna Encoders; **Conference:** SPRINGER, ObCom 2011, VIT, India. [[URL](#)]

LANGUAGES AND TECHNOLOGIES

- Java, Spring Framework, Python, JavaScript, MySQL, Cassandra
- Eclipse, Git, Maven, Docker, Jenkins, Google Closure, CMS – Joomla, Data Integration – Talend, OpenCV

EDUCATION

- National University of Singapore, Singapore** (*GPA – 3.74/5*) (Jul 2014 – Dec 2015)
Masters in Computing (Computer Science)
- National Institute of Technology, Bhopal, India** (*Score – 8.05/10*) (Jul 2008 – May 2012)
Bachelors in Technology (Computer Science)

INTERNSHIP AND TRAINING

- School of Computing, NUS, Singapore** **Graduate Student Researcher (Aug 2015 – Nov 2015)**
○ Design and develop web application to generate questions related to topic selected from GUI
○ Development done on Django
- Quantum Inventions, Singapore** **Software Development Intern (May 2015 – Jul 2015)**
• Developing infrastructure to support web service calls in an automated fashion. Technology: Talend-Java
• Design and develop prediction system and advertisement recommendation system based on car parking availability data and transport data. Technology: Python, PostgreSql.
- School of Computing, NUS, Singapore** **Teaching Assistant (Jan 2015 – Apr 2015)**
○ Organized lab sessions for course CS1020E – Data structures and algorithms at School of Computing, NUS
○ Invigilate during lab tests and grade individual submission by scrutinizing them
- Defense Research Development Organization, Bangalore, India** **Research Intern (May 2011 – Jul 2011)**
• Studied several research papers on informed search-based path planning algorithms such as A*, D*, D* Lite, Lifelong Planning A*, Anytime Dynamic A* and implemented D* Lite algorithm in C++ language on Robot Operating System
- Computer Management Corporation, New Delhi, India** **.NET with C# Trainee (May 2010 – Jul 2010)**
• Developed many Console Based and Window Based Applications using C# and ADO.NET such as School Management System, Office Daily Management System, Windows Notepad, Airlines Ticket Booking System etc.

PROJECTS

- **Car Park lots availability prediction:** Designed and developed a car park lot prediction system based on time series data. Semi Lazy Mining Paradigm technique was used to implement this system. *Technology: Python*
- **Distributed Multiplayer Maze Game:** Designed and developed multiplayer distributed maze game using RMI (Java). Developed Server-Client as well as Peer-to-Peer version. *Technology: Java RPC (RMI)*
- **OwnCloud File sharing web application plug-in:** Implemented features like invitation to comment, shared comments on a file, interactive tour, show online users. *Technology: JavaScript, PHP.*
- **PlaceR – Place recommendation Engine:** Designed and developed a system for recommending places to a user based on his interest. Interest is derived from user's twitter account data. *Technology: Python, Java.*
- **CSRF Scanner:** Developed a scanner to detect probable CSRF injection points in any web site/application and created automated selenium scripts to verify results. *Technology: Python, Scrapy.*
- **3D reconstruction from 2D:** Made a video showing 3D view of a 2D scene with the help of a single image of the 2D scene. *Technology: OpenCV, Python, Qt framework.*
- **Android Incog Mode:** Studied Android for data vulnerabilities. Developed application to run other apps in Incognito (protected mode). *Technology: Java.*
- **Particle-RRT Algorithm:** Studied Rapidly exploring random tree (RRT) algorithm and particle RRT algorithm. Implemented p-RRT algorithm in C++. *Technology: C++*
- **Catabot – Autonomous Robot:** Implemented an algorithm for an autonomous robot, Catabot, that could discern the distance of a basket and throw a ball with precision to pass through it. *Technology: Microcontroller, C*

EXTRACURRICULAR ACTIVITIES

- Graduate student representative at National University of Singapore for 2014-15 session
- Over all coordinator of Inter NIT Robotics Championship'11, India, a National Level Event
- Over all coordinated SWARM ROBOTICS workshop organized by IIT Kharagpur and ROBOSOFT SYSTEMS in Bhopal
- Attained 1st place in 'ZStart Academy Team Case Competition' where I solved a business case and presented the same solution