Abhay Kumar Singh

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Work Experience Details

Present Company Name: 11techsquare, a start-up based in Jaipur
Present Designation: Software Development Engineer; working here since 7 Sep 2015.
Product Name: Oscan
Product Description: As opposed to traditional hardware based scanners, Oscan is a cost-effective software solution for extracting data from omr sheets easily and accurately, using a very simple user interface.
Language, framework, library used: C++, Qt, Opencv, Zbar, Cryptopp, Rockey2

Job Responsibilities: Specifically speaking, for most of the time of my employment at 11techsquare, I developed a new product component called Template Creator replacing the old one to decrease the time taken by user to create a template from hours to about 20 minutes, thereby improving the user experience. Another major effort went into implementing support for sheets having omr fields both at the front and the back. Other minor works include the implementation of licensing and the logging mechanism.

While working on the product, the activities that I regularly performed were collecting and understanding requirements, designing software components, implementing features, fixing bugs, refactoring codebase, applying design patterns and software practices, reviewing code written by colleagues, pair programming, testing the product, providing customer support, researching when needed, discussing technical aspects of the product, conducting programming interviews to hire new members into the team.

Education

Degree	Institute	CPI or %	Passing Year
M.Tech. Computer Science and Engineering	Indian Institute of Technology Guwahati	7.89/10	2015
B.E. Computer Science and Engineering	Samrat Ashok Technological Institute, Vidisha, Madhya Pradesh	67.78%	2012
All India Senior School Certificate Examination	Christ Sr. Sec. School, Guna, Madhya Pradesh (C.B.S.E., Science)	78.4%	2007
All India Secondary School Examination	Christ Sr. Sec. School, Guna, Madhya Pradesh (C.B.S.E.)	85.2%	2005

Academic Achievements

- Held **All India Rank 344** with score 757 in the GATE 2012(CS).
- Have cleared **NDA** entrance exam 2008 and been called for SSB.
- Received Certificate of Merit from C.B.S.E. board for being among the **top 0.1** percent of successful candidates of AISSE 2005 in Science & Tech.
- Obtained **first rank** in district in **MBD Talent Search Examination 2004-05.**
- Have been amongst toppers in classes in school.

Technical Skills

Languages   : C, C++, Python, Java, Prolog, SQL, assembly 8085
Operating Systems : Windows, Linux (Ubuntu)
Web Technologies : HTML, JSP
Tools   : Git, Vim, LATEX, GDB, MySQL, Eclipse, Netbeans, Android Phone SDK, Photoshop, Gimp, Audacity

Master's Thesis

Network Resource Discovery: Mobile Agents versus Traditional Approaches - A Comparative Study   Jul '13 - Jul '15
Thesis Description: This thesis presents an investigation into the applicability and appropriateness of mobile agent technology against other network resource discovery techniques such a message flooding, in terms of their individual performances.
Languages used: Prolog, Python, Java

Major Projects

Implementation of Association Rule Mining Algorithm QFP on Hadoop Map Reduce Framework   Aug '12 - Dec '12
Project Description: In this project, we have implemented QFP Association Rule Mining Algorithm in the Hadoop Map-Reduce frame-work for the open source Mahout library. The above mentioned algorithm successfully finds all frequent item sets of the given data set and is made to run faster by running the code on a multi-node cluster in Hadoop Map-Reduce framework.
Language used: Java

Prototype of System for Elderly Homes Using Typhon   Feb '13 - Apr '13
Project Description: This project aims at deploying robots in elderly homes to take care of elderly people out there. Robots can communicate and co-ordinate among themselves via Typhon platform so as to complete different tasks ordered by elderly people.

Minor Projects

- Designed and implemented a real-time prototype of gps like system where a camera hanging at centre of roof can detect co-ordinates and velocity of various colored objects moving on floor; under the guidance of **prof. S. B. Nair.**
- Implemented a robot in a game called Prey and Predator, where it has to chase its prey and save itself from its predator; under the guidance of **prof. S.B. Nair.**
- Have had a hands on experience of LAN networks, Network devices & configurations, Routers; under the guidance of **Mr. Amit K Shrivastava**, Technical Head of HCL Career Development Centre, Bhopal & **Mr. Vimal Kumar Sharma**, Lead Network Designer.

Extra Academic Activities

- Volunteered in "blood donation 365 days", an initiative of JSG(TOPAZ) charitable trust.
- Was an official Dance For Kindness participant on Sunday, November 13, 2016, in Jaipur.
- Held Second position in Science Exhibition - Seniors at school in year 2005-'06.
- Submitted my project work on topic Food System Towards Nutrition For All in Distt. Level National Children's Science Congress 2002 held at Delhi Public School, Vijaipur.
- Held Second position in Painting Competition at school in year 2000-01 in VI Standard.
- Performed my first group dance in Samrat Utsav, cultural festival of SATI, Vidisha, though I have participated in a couple of acts in school as well.
- Participated in manual robotics competition Call on Duty in Technovision 10.