

# Abhay Kumar Singh

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Profile links:

<https://github.com/AbhayKumarSingh>

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## Education

M.Tech. Computer Science and Engineering,  
**Indian Institute of Technology Guwahati, 2015.**  
C.P.I : 7.89/10 (final C.P.I)

B.E. Computer Science and Engineering,  
**Samrat Ashok Technological Institute, Vidisha, 2012.**  
Percentage : 67.78%

C.B.S.E., Science,  
All India Senior School Certificate Examination, 2007.  
**Christ Sr. Sec. School, Guna, Madhya Pradesh.**  
Percentage : 78.4%

C.B.S.E.  
All India Secondary School Examination, 2005.  
**Christ Sr. Sec. School, Guna, Madhya Pradesh.**  
Percentage : 85.2%

## Fields of Interest

Analysis and design of Algorithms, Operating Systems

## 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 as message flooding, in terms of their individual performances.

**Languages used:** Prolog, Python, Java

**Guide:** Prof. S. B. Nair, Dept. of Computer Science & Engineering, IIT Guwahati

## 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 framework 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

**Guide:** Dr. Amit Awekar, Dept. of Computer Science & Engineering, IIT Guwahati

**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.

**Languages used:** Java, Python, OpenCV library

## 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

- 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.
- Stood 2nd in Essay competition in third class (97-98).