

SHUBHAM AGRAWAL

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EDUCATION

| Year | Program | Institution | CGPA/% |
|--------------|---|---|---------|
| 2007-Present | B. Tech, Computer Science and Engineering | Indian Institute of Technology, Kharagpur | 7.44/10 |
| 2007 | CBSE (Higher Secondary) | Central Academy Senior Secondary School, Kota | 84.2% |
| 2005 | CBSE (Secondary) | Jawahar Navodaya Vidyalaya, Agra | 86% |

HIGHLIGHTS

- Secured **All India Rank – 307** with **135/162** marks in **Mathematics** in JEE, 2007
- Qualified AIEEE, BITSAT, UPSEE (Rank – 281) exams, 2007
- Cleared 1st round of NTSE, 2005 and NSTSE, 2007
- Scored highest grades in the labs of Database Management Systems, Compilers and Computer Organization and Architecture

PROJECTS

- Fault Testing of Reversible Logic Circuits** (Aug'10-Present)
 - Design heuristics, which automatically add the faults into reversible logic circuits as per the fault model and test vectors
 - Design an application which simulates the benchmarks and outputs the fault coverage and set of undetected faults
 - Design an algorithm for unified testing with more than one fault models for reversible logic circuits
- Performance analysis of Cipher CLEFIA** (Mar'09-May'09)
 - Designed a feasible attack on the cipher CLEFIA used by SONY
 - The attack is based on inter-process information leakage through CPU's cache memory
- Built a simple **search engine** based on information retrieval techniques using Java (Sep'10-Oct'10)
- Implemented a **chat server** and **client application** using C in Computer Networks Lab (Oct'10)

INTERNSHIPS

- IBM India Private Limited, Pune** (May'10-July'10)
 - Project Title** • Test Automation Framework – Tivoli Provisioning Manager for Images and OS Deployment
 - Challenges** • Understand the design of a basic Test Automation Framework created by Geneva Lab
 - Design and implement a comprehensive framework for the same, customize it for India Lab needs
 - Achievements** • Learned about various automation tools like ANT and JUnit
 - Used virtualization and worked on different platforms and architectures as per the testing needs
- iViZ Techno Solutions Private Limited, Kolkata** (Jun'09-July'09)
 - Project Title** • Prototype Scan Execution Platform (SEP) by implementing Message Bus
 - Challenges** • Learn the techniques of Enterprise Integration Patterns, Ruby on Rails and make a highly **scalable asynchronous** implementation of SEP
 - Achievements** • Successfully prototyped the design and implemented it within a span of 40 days of training

POSITIONS OF RESPONSIBILITY

- President, Computer Science and Engineering Society, IIT Kharagpur** (Apr'10-Present)
 - Spearheading the conceptualization of **Bitwise-2011**, the annual algorithm intensive Online Programming contest
 - Organized the Fresher's Welcome and Farewell ceremony, 2010
 - Coordinator, Bitwise-2010** which had **6000** contestants from **65** countries; managed sponsorship worth **Rs. 1 lakh**
- Mess Committee Member, Rajendra Prasad Hall Association, IIT Kharagpur** (Aug'08-Aug'09)
 - Managed mess budget and vendor management for the mess of **530** students
 - Created an **online system** for mess menu management; the system was designed in PHP
 - Successfully implemented all my proposals

PROGRAMMING SKILLS

C, C++, Java, Shell Programming, Python, Ruby on Rails, MySQL, PHP, HTML, JavaScript, MIPS, Prolog

RELEVANT COURSES/LABS

| | | |
|-----------------------------------|----------------------|------------------------------|
| Database and Management Systems | Algorithms I and II | Probability and Statistics |
| Applied Organizational Psychology | Mathematics I and II | Engineering Entrepreneurship |

EXTRA-CURRICULAR ACTIVITIES

- Member, **Gold** Winning Rangoli Team, 2009
 - Rangoli was pixelated with more than 1.5 lakh pixels and a proper lighting was done to enhance the effects
- Member, **Bronze** winning Dramatics Team (Hindi), 2008
- Member, **InterHall** VolleyBall Team