



VERMA ABHISHEK

Male, Indian, 21 yrs

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EDUCATION

B.Tech

Computer Science and Engineering

CGPA : 9.56

Semester	I Dec 04	II May 05	III Nov 05	IV May 06	V Nov 06	VI Apr 07	VII Dec 07
GPA	9.88	9.81	9.50	9.70	9.18	9.21	In progress

Class XII (Maharashtra State Board)	Feb 2004	Residential Junior College, Ahmednagar	91.50%
Class X (Maharashtra State Board)	Mar 2002	Sacred Heart Convent School, Ahmednagar	88.00%

RESEARCH EXPERIENCE

- Department of Computer Science and Engineering, **IIT Kanpur** (May 2006 - July 2006):
Researched on Parallel Genetic Algorithms in Summer Undergraduate Research Grant for Excellence (SURGE) internship under Dr. Phalguni Gupta. Worked on the problem of reducing the height of Elimination Trees in Cholesky Factorisation for solving sparse symmetric positive definite system of linear equations. Used MPICH and developed novel mutation and crossover operators. (<http://www.iitk.ac.in/surge/abhishek.htm>)
- Department of Computer Science and Engineering, NIT Trichy (July 2006 – Nov 2006):
Worked under the guidance of Dr. Hemalatha Thiagarajan, to build a 16 node Beowulf cluster. Installed Fedora Core 4 on one node, cloned the hard disks, set up MPICH library and experimented with programs like the Mandelbrot fractal generator.

WORK EXPERIENCE

- **Google**, Bangalore (May 2007 – July 2007):

Worked on **Orkut**, an online social networking website. It involved understanding technologies like Map Reduce and the distributed file systems, collecting data for research on Orkut and developing new features.

IMPLEMENTATION PROJECTS

- **Intrusion Detection Exchange Protocol (IDXP)** (Spring '07) : Developed on the basis of the experimental RFC 4767. Involved Encryption and Digest algorithms like RSA, MD5, SHA, Triple DES and parsing XML.
- **Datagram Congestion Control Protocol (DCCP)** (Spring '07) : Implemented DCCP in Network Simulator (NS2) and compared performances of a broad spectrum of applications using TCP, DCCP and UDP.
- **Blowfish algorithm in Hardware** (Fall '06) : Wrote a fast and efficient VHDL module for Blowfish, a symmetric key block cipher.
- **Vocabulary Builder** (Fall '06) : Developed a web based interface for building English vocabulary and testing. Helpful for preparing for examinations like GRE and SAT. (<https://sourceforge.net/projects/vocab-builder>)
- **Dalal Street** (Spring '06) : Developed a stock market simulation game using Java and SWT (Standard Widget Toolkit). It is a platform independent **executable** which did not require the bulky JRE, a rare and unique feature. It was used in Pragyan '07, an international level technical symposium of NIT Trichy. (<http://www.pragyan.org/07/?page=/events/management/dalalstreet>)
- **Content Management System (CMS)** (Spring '05 – Fall '05) : Developed a CMS using Linux, Apache, MySQL and PHP (LAMP) and implemented it on <http://www.nitt.edu> (the official college website) and <http://www.pragyan.org>
- **Admission Management System** : (Fall '04) : Developed an online system to manage admissions for MTech and PhD students using PHP and MySQL.

PRIZES AND HONORS

- Ranked 1 of 70 students in Computer Science and Engineering Department, with a Cumulative GPA of **9.56**
- Best paper presentation award for **“Parallel Genetic Algorithms for reducing the height of Elimination Trees in Cholesky Factorisation”** in Department symposium Vortex '07
- Summer Undergraduate Research Grant for Excellence (SURGE) Award in IIT Kanpur
- Best team in Hacking Competition in Pragyan '07.
- Academic excellence award for topping the university in first year among 600 students with a Cumulative GPA of **9.85**

- Ranked 2601 of more than 100,000 students in All India Engineering Entrance Examination (AIEEE), and 72 in Maharashtra state, to enter NIT Trichy, a premier engineering institution, ranked 10th in India.
- Ranked 1 of 450 students in XII standard in Residential Junior College
- Ranked 1 of 300 students in X standard in Sacred Heart Convent School
- **Maharashtra Talent Search (MTS) Scholar**
- XVI in Maharashtra State in Regional Mathematics Olympiad (RMO)

SOFTWARE SKILL SET

- **Packages** : MS Office, Adobe Photoshop, AutoCAD, Matlab, Quartus
- **Languages** : C, C++, Java, HTML, JavaScript, VB, Shell Script, LISP, Prolog, Scheme, Verilog, VHDL, PHP, SQL
- **Operating Systems** : Windows, Linux (Fedora, Redhat, Suse, Ubuntu), Solaris

EXTRA CURRICULAR ACTIVITIES

- **Head of the Web team** which manages the college website <http://www.nitt.edu>
- **Event manager** for the management event **Dalal Street** in Pragyan '07, an international level technical symposium of NIT Trichy
- **Manager** of the **Computer Support Group (CSG)** for Pragyan '07
- Runner-up at Foosball tournament in Google Bangalore.
- Member of the **National Sports Organisation (NSO)**
- Member of the **Maharashtra Cadet Corps(MCC)** in High School

TEACHING EXPERIENCE

- Taught **C and C++** to first year students in a six week course conducted by **CRY (Child Rights and You)**
- Taught **Basics of Linux and Shell Scripting** to second year students as an active member of the **GLUG-T (GNU Linux User Group – Trichy)**
- Taught **Matlab** to second and third year students as a part of a two week Spider course
- Taught Advanced course on **Data Structures and Algorithms** to second and third year students in a six week course conducted by final year students