ABHINAV MAURYA

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RESEARCH INTERESTS

Machine Learning, Data Mining, Theory and Algorithms, Computational Biology, Computational Economics, Computational Finance

EDUCATION

July 2010-July 2012   **Master of Technology (Computer Science and Engineering)**   CPI: **9.22/10**
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING   *(ongoing)*
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY (IIT BOMBAY), MUMBAI

July 2004-May 2008   **Bachelor of Technology (Computer Engineering)**   CPI: **8.60/10**
DEPARTMENT OF COMPUTER TECHNOLOGY
VJTI (UNIVERSITY OF MUMBAI), MUMBAI

TEACHING EXPERIENCE

Aug 2010-Nov 2010   **CS 101: Computer Programming and Utilization**   *Teaching Assistant*
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING , IIT BOMBAY
Facilitator and system administrator for lab sessions.

Aug 2008-Jan 2009   **CS 307120/IT 308120: Computer Networks**   *Instructor*
DEPARTMENT OF COMPUTER TECHNOLOGY, VJTI
Conducted lectures for a class of more than 120 students, guided lab sessions, and held office hours.
Prepared and graded assignments, quizzes, and examinations.

Aug 2008-Jan 2009   **IT 308140: Automata Theory**   *Instructor*
DEPARTMENT OF COMPUTER TECHNOLOGY, VJTI
Conducted lectures for a class of more than 60 students, and held office hours.
Prepared and graded assignments, quizzes, and examinations.

PROFESSIONAL EXPERIENCE

Dec 2009-July 2010   **Senior Engineer**
WIPRO TECHNOLOGIES, NEW DELHI
IT Site In-charge for a client in the infrastructure and construction domain.
Management of enterprise IT infrastructure, including inventory, LDAP servers, email servers, and network infrastructure.

Jan 2009-Dec 2009   **Project Engineer**
WIPRO TECHNOLOGIES, NEW DELHI
Development of an enterprise web application using J2EE/JSP and Oracle 9i database.
The application was used to manage the online admission process of a university.

POSITIONS OF RESPONSIBILITY

Aug 2006-May 2007   **Class Representative**   *VJTI*
THE STUDENT COUNCIL
Elected class representative to the departmental student council during junior year of college.
Helped in organization of departmental activities and facilitated faculty-student communication.

Aug 2006-May 2007   **Editor**   *VJTI*
NIRMAAN-2007
Editor of the English section of annual college magazine *Nirmaan* during junior year of college.
Part of a team of three faculty members and around ten students that took the magazine from plan to print.

PROJECTS

Sept 2010-Nov 2010	**Distributed Hash Table**	*IIT Bombay*

ADVISED BY PROF. BHASKARAN RAMAN   WITH SWAPNIL SHAH

The project involved implementing a distributed hash table using an overlay architecture similar to Chord. Developed in C++ using socket programming and an efficient listener implementation using synchronous I/O multiplexing.

Oct 2010-Nov 2010	**TextusBonum (POS Tagging using HMM)**	*IIT Bombay*

ADVISED BY PROF. PUSHPAK BHATTACHARYYA

Developed TextusBonum, a part-of-speech tagger for English language using BNC corpus and HMM. The project involved development of training and testing modules in Java, including implementation of the Viterbi algorithm. Using LOO validation, the POS tagger achieved 94.31% precision.

Sept 2010-Nov 2010	**Circuit Verification using Prolog**	*IIT Bombay*

ADVISED BY PROF. PUSHPAK BHATTACHARYYA

Developed a boolean circuit verification module in Prolog. Given a circuit specification in Prolog, the module could validate the circuit behavior against a truth table. It could also detect failures in the circuit specification like open circuit, short circuit, connected to 0/1 along with the point of failure in the circuit specification.

Sept 2010-Nov 2010	**Theorem Prover for Propositional Logic**	*IIT Bombay*

ADVISED BY PROF. PUSHPAK BHATTACHARYYA

Developed a semi-automated theorem prover for the Hilbert Formalization of Propositional Logic. The project required implementing the propositional logic inference process including unification, resolution and modus ponens.

Aug 2010-Sept 2010	**Control of Inverted Pendulum using Fuzzy Inferencing**	*IIT Bombay*

ADVISED BY PROF. PUSHPAK BHATTACHARYYA   WITH ASHUTOSH NIRALA

Simulated control of an inverted pendulum using the Fuzzy Logic toolbox in Matlab. The simulation was carried out for different physical characteristics of the pendulum, and various types of fuzzy profiles and fuzzy inference procedures.

Aug 2010-Nov 2010	**μScribe**	*IIT Bombay*

ADVISED BY PROF. KAVI ARYA   WITH LOKESH RAJWANI, YOGESH KAKDE

Programmed a Firebird V Hexapod using AVR GCC to scribe out various shapes such as letters, numbers, geometrical figures, etc. The challenges involved programming for calibrated movements and elimination of movement jitter.

Aug 2010-Oct 2010	**SocialSeer**	*IIT Bombay*

ADVISED BY PROF. G. SIVAKUMAR

An application that can help in interactive visualization of information about Social Networks. Developed in Java using the Prefuse data visualization toolkit. Allows for searching the graph based on user information.

Aug 2010-Nov 2010	**JANM (Just Another Network Monitor)**	*IIT Bombay*

ADVISED BY PROF. G. SIVAKUMAR   WITH BIKASH CHANDRA, ABHISHEK SAGAR

An application to help network administrators monitor network performance through visualization of various network parameters and alerts of any disruptive activities. Developed in Java using the Prefuse data visualization toolkit.

Aug 2007-April 2008	**Application of LSI to Information Retrieval in a Medical Corpus**	*VJTI*

ADVISED BY PROF. M. R. SHIROLE   WITH IMRAN SIDDIQUE, MANISHA ANKAM, SHAMAL WARLIKAR

The undergraduate senior-year project employed Latent Semantic Indexing (LSI) to retrieve relevant documents from a corpus of documents on medical topics. Implemented in Java, the project involved various optimizations in document representation and in the retrieval mechanism.

Aug 2006-Oct 2006	**JARN Messenger**	*VJTI*

ADVISED BY PROF. G. P. BHOLE   WITH JUZER BALAPURWALA, ROMA SHAH, NEHA KINHALKAR

The JARN Messenger employed Java Swing libraries for building the GUI, TCP/IP-based socket programming and Java's object serialization facility for data transfer, and multi-threading to utilize server's processing capacity to the maximum.

HONORS AND AWARDS

- *All India Rank 46* and *GATE score 939/1000* in Computer Science paper in GATE-2010; placed in the top 0.05 percentile amongst 107086 candidates.

- Recipient of the merit-cum-means *JRD Tata Scholarship* in three consecutive years of college, viz. 2006, 2007 and 2008, reimbursing the educational expense of tuition.

- Ranked *First* in the first and fourth semesters, and *Fifth* overall in Class of 2008, BTech (Computer Engineering), VJTI.

- Ranked *First* in HSC in the non-vocational stream of studies at K J Somaiya College of Science And Commerce.

- *Finalist* in *Eureka'08* organized by IIT Bombay's Entrepreneurship Cell, the biggest business plan competition in Asia in terms of participation and prizes.

- *First Prizes* in technical paper presentation contests at *IEEE-K J Somaiya chapter, CSI-RAIT chapter, D J Sanghvi College of Engineering,* and *NMIMS*.

- *Third Prize* in technical paper presentation contest at *Bharati Vidyapeeth College of Engineering*.

- *Runner-up* in technical paper presentation contests at *VJTI* and *K J Somaiya College of Engineering*.

- *Second Prize* in programming contest organized under the aegis of *IEEE-K J Somaiya chapter*.

- *Third Prize* in programming contest organized under the aegis of *IEEE-TSEC chapter*.

- *Second Prize* in the district-level *Shri S M Mehta Memorial Quiz Competition* organized by *Computer Business Management (CBM)*.

- *First Prize* in the drama competition held during VJTI's annual cultural festival *Pratibimb-2007*.

- *Runner-up* in the *International Logo Design Contest* organized by *Snap, IdeaLab, California, USA*.

- *Winner* of the *Book Pitch Contest* and *Runner-up* in the *Flash Essay Contest* at *Kala Ghoda Arts Festival-2008*.

- *Second Prize* in a district-level debate organized by the *Rotary Club Of Thane* at *Saraswati Vidyalaya*.

EXTRA-CURRICULAR ACTIVITIES

- *Participant* in the *National Workshop on Current Trends in Information and Database Technology* conducted at *VJTI, January 2009*.

- *Organizer* of the Mega-event *CSI* held under the aegis of the annual cultural festival *Pratibimb-2007*.

- *Organizer* of *Papyrus* (technical paper presentation contest) held under the aegis of the annual national technical meet *Technovanza-2006*.

- *Organizer* of a seminar on *Effective Technical Paper Writing And Presentations* held under the auspices of *Association of Computer Enthusiasts (ACE), VJTI*.

- *Tutor* for *C Programming Language*, *C++ Programming Language*, *Guidelines For Effective Technical Paper Writing And Presentations*, and *Compiler Development In Incremental Stages* workshops organized by *Association of Computer Enthusiasts (ACE), VJTI* from 2005 to 2007.

- *Participant* at a caucus on *Technology and Environment* held at *Rajiv Gandhi Institute of Technology (RGIT)*, *September 2007*.

- *Participant* at the national environmental meet *Avani* held at *Srimati Sulochanadevi Singhania High School*, Thane.

- Published fiction in *Urban Voices* (a literary anthology) and non-fiction in *Little India* (a US-based periodical).

- *Official Reporter* for *The Kala Ghoda Gazette* during the *Kala Ghoda Arts Festival-2008*.

- Attended the workshops *The Art Of Freelancing* and *The Art Of Translation* at the *Kala Ghoda Arts Festival-2008*.

GRADUATE COURSE WORK

Foundations of Machine Learning	Artificial Intelligence	Embedded Systems
Advanced Machine Learning	Organization of Web Information	Mobile Computing
Statistical Relational Learning	Graduate Seminar on Data Center Systems	Advanced Computer Networks
Introduction to Probability and Linear Algebra	Graduate Software Lab	

UNDERGRADUATE COURSE WORK

Mathematics

Engineering Mathematics (4 courses)
  – Vector Algebra and Calculus
  – Differential Calculus
  – Integral Calculus
  – Real and Complex Analysis
  – Linear Algebra
  – Numerical Methods
Engineering Statistics
  – Probability and Statistics
Discrete Mathematics
  – Combinatorics
  – Graph Theory
  – Lattice Theory
  – Group and Ring Theory

Core Courses

Computer Programming (C/C++)
Object Oriented Programming (Java)
Computer Programming Lab
Theoretical Computer Science
Data Structures
Analysis of Algorithms
Analog and Digital Communication
Digital Logic Design and Applications
Computer Organization and Architecture
Computer Networks
Database Systems
Object Oriented Analysis and Design
Operating Systems and UNIX
Systems Programming (Compiler Design)

Advanced Courses

Intelligent Systems
Multimedia Systems
Distributed Computing
System Security
Advanced Databases
Digital Signal Processing
Web Technology
Computer Graphics
Image Processing (Elective)
Data Warehousing and Mining (Elective)

SKILL SET

Programming Languages	:	C, C++, nesC, Java, Python, Prolog, Shell Scripting
Programming Libraries	:	Prefuse, MPI, Socket Programming, TinyOS
Technological Tools	:	Matlab, Scilab, NS2
Database Technologies	:	SQL, Oracle 9i, MySQL
Web Technologies	:	HTML, CSS, JavaScript, PHP, ASP, JSP
Operating Systems	:	Linux, Windows
Development Environments	:	NetBeans, Eclipse, WinAVR, AVR Studio, ICC AVR
Documentation Tools	:	LaTeX, Beamer, Lyx, OpenOffice, MS Office

PERSONAL INFORMATION

Age	: 24
Nationality	: Indian
Languages	: English, Hindi, Marathi, French
Hobbies	: Literature, Cinema, Music, Dialectics, Blogging, Travel

REFERENCES

Available upon request.

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TESTIMONIALS (VIA LINKEDIN)

"As a technical trainer with the Talent Transformation team of Wipro Technologies, I have known Abhinav since he joined Wipro Technologies in January 2009. During his training, Abhinav came across as a calm, persevering, and diligent trainee. His quest to do his best in each task and his attention to detail are qualities that I find commendable in him. It was these qualities that helped him earn the highest score amongst a batch of more than hundred trainees at Wipro. I hope that the perseverance and intelligence that Abhinav has demonstrated during his training stand him in good stead in his career. I wish him all the best in his future endeavors."

- Parvathy S, Trainer, Wipro Technologies, managed Abhinav at Wipro Technologies

"I mentored Abhinav Maurya during his training and project work in Computational Biology at the Tata Institute of Fundamental Research. Abhinav came across as a highly motivated and focused student, ready to learn from mistakes and curious to explore new areas of research. Even though it was his first encounter with academia, his dedication and potential for academic research were amply evident from the discussions we had and the work he did during his training. I wish him success in his career and hope that the potential I saw in him as a student shall be realized in the years to come."

- Sugata Sanyal, Professor, Tata Institute of Fundamental Research, advised Abhinav at VJTI

"I taught Operating Systems to Abhinav. I found him diligent and intelligent. He managed his studies and extracurriculars very well."

- Saurin Tailor, Software Developer at J P Morgan, taught Abhinav at VJTI

"I have studied with Abhinav and truly believe that he is a very hardworking, sincere and intelligent guy. Being partners in one of the term projects, I have observed that Abhinav is very dedicated and has a strategic approach to solving problems. I wish him all the best for his future."

- Juzer Balapurwala, Software Engineer, Accenture Technology Solutions, studied with Abhinav at VJTI

"I studied under Mr. Abhinav Maurya at VJTI. He taught Computer Networks with impeccable communication skills and a thorough knowledge of the subject. I would gladly have him as a teacher again."

- Mehernosh Bhathena, Systems Engineer, Tata Consultancy Services, took a course taught by Abhinav at VJTI