Ashutosh Pathak

E-306, Hall-8

Indian Institute of technology Kanpur

+91-9415540881 apathak@iitk.ac.in http://home.iitk.ac.in/~apathak

Education

	Degree/Certificate	${\bf Institute/School, City}$	${ m CGPA}/\%$
	Current CGPA	Indian Institute of Technology, Kanpur	8.0/10.0
	AISSCE-XII,CBSE	Senior Seconder School Sector -X ,Bhilai	73%
Į	AISSE-X,CBSE, school toper	Kendriya Vidyalaya Sarni,MP	83.6%

Awards

- Securred All India Rank 416 in IIT-JEE exam in 2004 in general category.
- Secured All India Rank 1200 in the AIEEE 2004 with state rank 12.
- Cleared the first phase and secured the Top 1% in National Physics Olympiad .
- Secured All India Rank 2 in the ICFAI engineering exam 2004.

Research & Technical Capability

- I worked on watermarking videos using dct transformation during Internship **Achievemnt:** My sugested improvement and speed up for the same , result in the paper published in the "Electronic Imaging 2008". I received the appreciation and invitation for the conferance in callifornia , from the Intern Professor .
- Currently I am doing my masters thesis under professor Dr Phalguni Gupta , The title of my thesis is "Biometric Online signature verification using digital Pad" , which is MHRD sponsered project.
- I spent the summer vacation of 2^{nd} year, at SIMORTEL, a SIDBI incubated company. I worked on a GPS based software to track the buses in city which is more likely to be used in future years in India, written in C.

Positions of Responsibility

- Elected as technical assistance(TA) in cs220(Computer Organisation) course.Our duty was to help the course students in implemntation of ALU , Regfile, Ram , CPU in Spartan series 3 FPGA Board.
- I Mentored the winter project under the sunclub and lead the group of 3 people and helped them in completing the project.

Summer internship

Paris, France

INSTITUTE NATIONAL DES TELECOMMUNICATIONS (INT)

may. 2007 - July. 2007

- Implemention of watermarking on the videos.

Extension of Nachos

Dr. Manindra Agarwal, CSE Department, IIT Kanpur

Fall 2006

 Implemented some features like System Calls, Scheduling Algorithms, Multiprogramming and Virtual Memory on Nachos operating system.

UDP-Chat system

Dr. Bhaskar Raman, CSE Department, IIT Kanpur

(Fall 2006)

 We Developed a chat system with functionalities of conferencing and file sending .We have implemented reliability, flow control and congestion control over transport layer in User Datagram Protocol (UDP) using socket programming.

Implementation of SDLX Processor

Dr. Rajat Moona, CSE Department, IIT Kanpur

Spring 2005

Implementation of SDLX processor having Instruction-fetch & Register-decode unit, ALU,
 Register file and MEM unit .Work was done on Spartan-3(FPGA board)in Verilog.

Oberon Compiler

Dr. Sanjeev Kumar Agarwal, CSE Department, IIT Kanpur

Spring 2007

- I with two of my colleges, developed a bare minimal compiler for Oberon language in java with almost all features having lexical , Syntax Analyzer and Semantic analyzer phase .

Solver for Very Large System of Equations

Dr. Phalguni Gupta, CSE Department, IIT Kanpur

Spring 2008

 In a group of two, we successfully developed a solver for a large system of equations of order 1000x1000 .It is for clusters and mesh connected computers, with GF2 field and real field

Offline biometric signature Verification

Dr. Phalquni Gupta, CSE Department, IIT Kanpur

Fall 2008

- We developed a signature verification system using SVM (Support Vector Machines) which can be used for scanned images of signature.

Similarity Search in time series database

Dr. Arnab Bhatacharya, Department of Computer Science, IIT Kanpur

Fall 2008

- I have implemented Dynamic Time $\operatorname{Warping}(\operatorname{DTW}$) method to search KNN querries in long time series databases like videos , audios etc.

Concurent vi

Dr. R. K. Ghosh, CSE Department, IIT Kanpur

Spring 2008

- To make ${f Vi}$ a concurrent editor of linux .we implemented user defined locks in the data section .code was submitted on sourceforg.net and get much appreciation from opensource community as it was totally new feature in the vi

Medical Records

Dr. Sumit Ganguly,, CSE Department, IIT Kanpur

Fall 2006

- it was developed using LAMP architecture. It can show statistics of population, diseases, region and year.

Dual Stepler

Dr. Amit Ray, Dept. Of Huminty & Social Science,, IIT Kanpur

Spring 2007

 To make single stepler able to use two kind of pins . we have designed a inovative multipurpose stepler, we secured A grade in this.

Courses

Relevent:

- System related:Distributed Systems, Operating Systems, Computer Organisation, Fundamental of
 electronics, Principles Of DataBase Systems, Compiler Design.
- Theoritical:-

Advance Algorithms , , Data Structures , Parallel and semi Numerical Algorithm , Theory of Computation , ,Numerical Methods In Engineering, Linear Algebra, Discreet Mathematics .

- Network related:-Mobile Computing , Computer Networks , Data Streaming .
- Software:Principles Of Programming Languages ,Software Engineering ,Internet technologies ,
 Programming Tools &Techniques,Fundametals Of Computing .

other courses: rest are from grade sheet.

Skills

Languages: C/C++, LATEX, Java, C#, Php, ruby, shell screpting, UML, Verilog, IA32 Linux Assembly.

Operating Systems: Linux (Redhat, Ubuntu, Fedora), Solaris, Windows 95/98/NT/2000/XP

Applications and IDE: Mathematica, MatLab, Visual Studio, Eclipse, Netbeans, GCC debugur, OpenOffice, MS Office XP, Ruby on Rails, LAMP, Apache Web Server, Mysql, Oracle.

Lab Skils and Experience: FPGA Board, Mechnical Lab, Electronics Lab.

Miscellaneous: Application of software engineering concepts, strong verbal and written communication skills, excellent troubleshooting and debugging skills, exceptional problem solving skills, good team spirit.

Interests And Extra Corecullar

Academic: systems, os, network, databases, new web based technologies, microcontrollers.

Sports: swimming, I was in Institute swimming team during 1st year at IITK.

Computers: Mozilla beta tester, enjoy using and learning Linux systems.

technology: reading latest technology news using Zdnet ,Code project.

Other: Reading novels