

Pankaj Kumar

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Address

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Interests

Networks, Security, Computer Architecture
Linux, Algorithms and Machine Learning.

Academic Record

High School July 1998- April 2000
Delhi Public School ,
Bokaro Steel City.
Subjects - Physics, Chemistry, Mathematics , Computer Science and English
Marks - 86 percent aggregate

Bachelor of Technogy: July 2000- due May 2004
Indian Institute of Technology,
Kharagpur,
West Bengal, India
Aggregate CGPA - 8.64/10

Achievements and awards

National Talent Search Scholarship 1998
I got the National Talent Search Scholarsip which is given to 750 students every year by the
Indian government .

Merit List in Mathematics 1998
I was in the national top .1 percent of students in mathematics.

Physics and Chemistry Olympiads 2000
I was selected for the regional levels in both Chemistry and Physics Olympiads.

JEE 2000
I secured All India Rank 110 out of around 140,000 students who appeared in JEE 2000.

CourseWork

Design and Analysis of Algorithms
Discrete Structures
Switching Circuits and Logic Design
C Programming and Data Structures
Formal Language and Automata Design
Computer Architecture and Organization
Computer Networks
Operating Systems
MicroProcessors and MicroControllers
Artificial Intelligence
Machine Learning
Software Engineering
Cryptography and Network Security
Algorithms for Bioinformatics
Advanced Computer Architecture

Embedded Systems

Projects

Design and implementation of the Client side for Samvidha. Guide: Prof Sudeshna Sarkar
This Media Lab Asia project caters to the needs of schools with low bandwidth internet connections .In this project we try to learn the most relevant information for the schools and we are developing a local repository for it using the Apache Web Proxy .
B.Tech Degree Project

Firewall Rule Collection Software. Guide:Prof Atul Prakash,U of M, Ann Arbor .
This software used to collect firewall rules from Multiple Administrators with different Access rights over Network Resources . I am trying to write the software for enforcing the firewall rules over the network .
During My Summer internship at the University of Michigan

Development of Downloader. with Prof Sudeshna Sarkar
I wrote this code which downloads websites like wget does but you can set many other parameters and it can also work as a personalised downloader if given a function to calculate the user's priority of a given web page.It uses the HTTP protocol.

k-center clustering with Piyush Kumar
I wrote this software which can compute the n best k-dimensional spheres which can cover a given set of k dimensional points . I could test it for n=5 and k=3 .

Study of the XFS file system Guide: Prof R.BadriNath
We studied the various aspects of the XFS File system which implements many new features like journalling and improved ACLs .We also developed a dummy file system that could mount on linux2.0.

You can download the source code to all the projects from my website

Course Projects

POP3 client Guide: Prof D.RoyChaudhury
I wrote a POP3 client to download messages from POP3 servers to different directories according the mail subject.

Event driven simulation Guide: Prof D.RoyChaudhury
WE wrote a code for event driven Simulation of packets with random error injection and variable number of nodes and variable bandwidth.

Array Processor Guide: Prof I. Sengupta
I wrote a synthesizable verilog code for a 16 Processing element array processor with a hypercubeconnection which had a very basic set of instructions for each of the 16 processors like load, store, move, movetootherPE , ADD , SUB .

SLAGAN implementation Guide: Prof Rimli Sengupta
We wrote this code which implements Shuffle LAGAN . An Algorithm which can resolve genomic alignment with rearrangements .

Traffic light Controller Guide: Prof A.Pal
I wrote the program and developed the hardware to implement a traffic light controller on a 8031 microcontroller.

4 bit CPU Guide: Prof D.Sarkar
We made a microcode implementation of a 4 bit CPU on the Register level .

Software cataloguing software Guide: Prof Rajib Mall

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This Java code was written along with its UML design as a part of my Software Engineering assignment.

Computer Skills

Languages: C++,C, Matlab, Html,Java,Python,Prolog .
Tools: Simplescalar,UML,Rational Rose,Latex ,Office ,vmware,Swing,GTK,tcl
Servers: Apache webserver with cache and Proxyserver,OpenLDAP server
Libraries: STL,OpenGL,OpenSSL,weka Machine learning Library,scew XML library
Operating Systems: Unix/Linux, Windows/Cygwin.
RFCs : KeyNote, HTTP etc.
Operating systems: Linux ,windows(working level knowledge)

Language skills

Hindi Native Language
English Writing and Speaking .. GRE (1500/1600 + 5/6) TOEFL (290/300)

References

[Prof.Atul Prakash](#)
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University of Michigan, Ann Arbor
Michigan 48105, USA.

[Prof.Rajib Mall](#)
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