

Prenayan Kaul

B.E. Computer Science and Engineering (2003)
Netaji Subhas Institute of Technology, New Delhi

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Objective

To work in a challenging environment which fosters growth of the intellect as well as skills.

Areas of Work

- User Centric Data Mining - *Intension Mining*
- Privacy Protection in Database Systems - *Hippocratic Databases*
- Evolutionary Computing - *Genetic Algorithms*

Education

- Cumulative aggregate percentage for 8 semesters in B.E. : **80.33 %**
- Aggregate percentage in Grade XII : **93.8 %** (Computer Science : **99%**)
- Aggregate percentage in Grade X : **89.6 %**

Internships and Work Experience

- **RESEARCH INTERNSHIP :**
BioInformatics Center, Jawaharlal Nehru University, Delhi.
Field of Work: Genetic Algorithms. *Duration :* 18 months.
- **RESEARCH INTERNSHIP :**
Computer Science Department, IIT Delhi.
Field of Work: Data Mining. *Duration :* 16 months.
- **SUMMER INTERNSHIP :**
Ministry of Communications & Information Technology, Govt. of India.
Field of Work: Database pruning & Web-enabling. *Duration:* 2 months.

Technical Skills

- Programming Languages: ANSI C / C++, VB .net, VS .net C++.
- Operating Systems : Microsoft Windows variants, Linux
- DBMS : MS Access, IBM DB2, Postgres
- Packages : Adobe Acrobat, MATLAB, PSPICE, MS Office, PALASM, WEKA, RicBis

Relevant Courses Undertaken

Artificial Intelligence	Data Structures
Principles of Communication Engineering	Theory of Finite Automata and Languages
Expert Systems	Software Engineering
Database Management and Information Systems	Discrete Mathematics and Design of Algorithms
Compiler Design	Operating Systems
Computer Graphics	Advanced Computer Architecture
Computer System Organization	Computer Networks
Microprocessors I and II	Digital Circuits and Systems I and II
Circuits and Systems	Electromagnetic Theory

Projects Undertaken

Data Mining

- **Implementation of Intension Mining framework**

Intension Mining is a user-centric mining scheme based on incremental mining algorithms for various types of patterns and involves giving the user a database-type access to patterns encouraging flexibility and experimentation in the process of Intelligent Data Analysis.

OS : Red Hat Linux

DBMS : Oracle 8, Postgres, IBM DB2

Language : ANSI C++

Databases

- **Implementing and Web-enabling of Ministry of Communication Database**

The project involved pruning a telecom connectivity database of the Ministry of Communication, Govt. of India and also designing a front-end user interface for it to provide local access using Visual Basic 6 and remote access using ASP.

- **Employment Exchange**

The project involved designing a front-end for data retrieval and entry into a database to function as an Online Employment Exchange.

- **Payroll Generation System**

The project involved designing a front-end for data retrieval and entry into a database and output pay-slips for each employee.

OS : Windows 2000 Professional, NT 4.0

Programming Tools : Microsoft Visual Studio 6

Back-end Databases : MS Access, SQL Server

Genetic Algorithms

- **GALIB**

GALIB is a genetic algorithm library which has been made using self defined structures for all components instead of using pre- defined data types .The library also has certain hybrid operators at various levels as Crossover and Mutation

- **PROSTRUC**

PROSTRUC is a Genetic-Algorithm based software, which uses GALIB with GN Ramachandran's fourth atom fixing method initiator and energy optimization as the fitness operator to generate a PDB file with the 3-D coordinates.

- **GADOCKER**

GADOCKER is a genetic algorithm based software, which uses GALIB and PROSTRUC to generate a set of stable conformers for the compound and then uses a cavity detection program for a given protein to investigate their feasibility to dock with different ligand configurations.

OS : Red Hat Linux

Language : ANSI C

Awards and Achievements

- Awarded second prize in Technical Paper presentation at Technovision, Troika 2002 held at Delhi College of Engineering (DCE), for the paper titled '**Implementing Multimedia Session in SIP**'.
- Awarded Institute Merit Scholarship at Netaji Subhas Institute of Technology (NSIT).
- Secured 89th rank in the Common Entrance Examination for DCE/NSIT in 1999.
- Awarded National Merit Scholarship under the National Scholarship scheme of Govt. of India for performance in AISSSE '99.
- Among the top 5 students of the 1998-99 school batch in AISSSE '99.
- Awarded National Merit Scholarship under the National Scholarship scheme of Govt. of India for performance in AISSSE '97.
- Secured 100% marks in Delhi Mathematics Olympiad in 1996.

References

- Dr. S. K. Gupta
Professor, Computer Sc. and Engg. Deptt. , IIT Delhi, New Delhi.
- Dr. Devapriya Choudhury
Asso. Professor, Bio Informatics Center, JNU, New Delhi.