

Nagender Parimi

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EDUCATION

Rensselaer Polytechnic Institute
MS (Computer Science)

Troy, New York
August 2003 - May 2005

GPA: 4.0/4.0

Prof. MJ Zaki's Data Mining Research Group, Department of Computer Science

Relevant Coursework – Operating Systems, Computer Algorithms, Programming Languages,
Data Mining, Probability Theory, Network Programming, Enterprise Java Programming

Bachelor of Engineering (Computer Engineering)

1999 - 2003

Netaji Subhas Institute of Technology (formerly DIT)

University of Delhi, India

EXPERIENCE

- **Summer Internship at the Data Mining group, Xerox Research** June - August'04
Wilson Research Center, Xerox Corp., Webster NY
Mining Machine Service Logs: Worked on mining actionable information from service logs of copier/print machines. The goal was to develop a model to correlate a machine's service data to current health of the machine, and hence customer happiness. Several approaches were undertaken - decision trees (boosting and bagging variants), nearest neighbor learning, Bayesian classifiers (supervised learning schemes); Expectation Maximization (EM) and K-means (clustering schemes). Preprocessing measures were applied to deal with characteristics of real world data such as noise, missing values and imbalance in class distribution. A Java prototype was developed, employing tools such as Oracle DataMiner and Weka
- Graduate Teaching Assistant August'03 - May'04
Data Structures & Algorithms (undergraduate), Artificial Intelligence (graduate)
- Summer Intern at Indian Institute of Technology, Delhi, India June - July'02
Study of classification concepts, among them prominent methods such as neural networks and decision trees. A comparative analysis was made on the performance of these two techniques; the classification algorithm SLIQ was used for building decision trees, contrasted with a back propagation neural network

PROJECTS

- **Data Mining Template Library** (Sept'03 - present): Working on the analysis of class of frequent pattern mining problems, such as market basket analysis, temporal sequences and tree/graph patterns. Our previous work included the development of a generic pattern mining library whose algorithms and data structures would solve the frequent pattern mining task for several pattern types. It entailed the design of generic algorithms by coalescing the common characteristics of several specific ones. The focus of our current work is to identify these

inherent characteristics that distinguish a pattern mining task from another. We attempt to capture these traits in a formal framework for analysis of this class of problems. We extensively utilize the template mechanisms of C++ for this purpose

- Development of concurrent HTTP proxy server, TFTP client, design of a P2P messaging system
- Simulation of complete operation of the Memory Management Unit of an operating system
- Implementation of an electronic stock trading system using J2EE concepts such as JDBC/Servlets/JSP

TECHNICAL PROFICIENCY

Languages: C/C++ (4 years), Java (4 years), Python (1 year)

Platforms: Unix variants (Linux and Solaris), Windows; **Databases:** Oracle SQL

Web technologies: J2EE, XML, JavaScript, HTML

Tools: Visual Studio, Matlab, Oracle DataMiner, Weka Data Mining Toolkit, L^AT_EX

HONORS/AWARDS

- ★ Graduate Teaching Assitantship at RPI (2003 - 04); Research Assistantship (2004 - present)
- ★ External referee for SIAM Data Mining, ACM Symposium on Applied Computing and PAKDD conferences
- ★ Awarded All India National Merit Scholarship in 1997, 1999

PUBLICATIONS

- MJ Zaki, **N Parimi**, N De, F Gao, B Phoophakdee, J Urban, V Chaoji, M Al Hasan, S Salem: '*Towards Generic Pattern Mining*'; International Conference on Formal Concept Anaysis, France, February 2005
- B Chandra, S Majumdar, V Arena and **N Parimi**: '*Elegant Decision Tree Algorithm for Classification in Data Mining*'; IEEE Computer Society - Proceedings of the Third International Conference on Web Informations Systems Engineering, December 2002, Singapore
- **N Parimi** and H Gurushyam: '*Generic Discrete Event Simulation Environment*'; Joint 9th National Conference on Applied & Industrial Mathematics and 5th Annual Conference of Indian Society of Information Theory & Applications, February 2002, New Delhi, India