

Lakshmi Naarayanan Ramakrishnan

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EDUCATION:

M.S. in Computer Science
University of Minnesota, Twin Cities
Expected Graduation: June 2007.
GPA: 3.9/ 4.0

B.E. Information Technology.
NITK Surathkal, India.
June 2005
Aggregate: 90%

ACADEMIC ACHIEVEMENTS:

- Gold medalist in National Institute of Technology Karnataka, Surathkal, India for topping Department of Information Technology at Bachelors Level.
- Recipient of Young Engineer Fellowship at Indian Institute of Science, Bangalore, India, in the department of Computer Science and Automation in May 2004. This scholarship was offered to only four computer science students all over India.

WORK EXPERIENCE:

- Research Assistant in Prof. Vipin Kumar's Data Mining group, Dept. of Computer Science, University of Minnesota (9/2006 onwards)
 - Working on Data Mining techniques used for Protein Function Prediction using Gene Expression data, focusing on key issues such as Functional class overlap, Dataset selection.
 - Performing a comparative study on the effect of various normalizations techniques as pre-processing steps, for gene expression data.
 - Studying the evolution of genetic code in yeasts using genome-scale data analysis.
- Summer Intern at Cardiac Rhythm Disease Management, Medtronic, Inc. (5/2006 to 8/2006)
 - Worked in the Tools Group, CRDM East, Minneapolis.
 - Designed and developed a suite of tools that periodically test the integrity of the Concurrent Versioning System (CVS). These programs run a set of diagnostic tests on the repositories and reports any inconsistencies found to the Tools Group.
 - Used Python for implementing the suite and Oracle DB as the back-end.
- Research Assistant to Prof. Arkady Khodursky, Dept. of Biochemistry, University of Minnesota (9/2005 to 5/2006)
 - Ported a copy of Stanford Microarray Database to local server, which serves the need for a robust database for storing microarray experimental results.
- Research Scholar at Indian Institute of Science, Bangalore, India in the Dept of Computer Science and Automation with Prof. Narahari. (5/2004 to 8/2004)
 - Researched in the field of Combinatorial Optimization and Goal Programming

PROJECTS:

- Co-Authored a survey paper on "Challenges and Techniques of Microarray Data Mining"
- Implementation and Analysis of VIPER algorithm
 - Implemented VIPER algorithm, which is a vertical association mining algorithm.
 - As a team of two, analyzed its run-time performance versus other algorithms like MaxClique and Apriori.

- Online Test Software at Yahoo Inc. Software Development Center, India.
 - Developed web-based software for automating the recruitment process.
 - As a team of five, we implemented the test that consisted of multiple choice questions and descriptive questions, with the ability of automated evaluation.
- A mini - RDBMS package, called the MINREL (Mini-Relational Database)
 - Implemented a mini-relational database system. The SQL queries were implemented from scratch.
- Advanced Railway Reservation System with Visual Basic and MS Access.
 - Used routing algorithms to incorporate need based routing of passengers.
 - Implemented additional features like choosing the best path, in terms of cost, tourist destinations covered etc.
- Pre-caching proxy server using Python-CGI
 - This provides better browsing experience for the user with faster response times
- Interactive computer graphics package with animations.
 - Implemented the basic algorithms for drawing lines, circles, ovals and other basic shapes.
 - Also implemented basic animations such as translation, rotation and other combinations of them.
 - Incorporated a save feature to save and replay animations.

RELEVANT COURSE WORK:

Graduate Level:

Introduction to Data Mining, Business Intelligence, Advanced Algorithms and Data Structures , Computational Techniques for Genomics, Data mining in Bioinformatics, Statistical Analysis, Advanced Internet Programming, Overview of Database Research.

Undergraduate Level:

Algorithm Design, Data Structures, Principles of Database Management Systems, Database Application Design, System Software, Software Engineering, Probability and Statistics, Operating Systems, Compilers, e-Commerce.

SOFTWARE SKILLS:

General purpose languages:	C, C++, Java, C#
Interface design languages:	Visual Basic, HTML.
Server side programming languages:	PHP, ASP, CGI.
Scripting languages:	VBScript, JavaScript, Perl, Python.
Databases:	mySQL, Oracle, MS Access.
Scientific Simulation Languages:	Matlab, R
Other Applications:	.NET Framework, MS FrontPage, MS Excel,
 Platforms:	 Windows, Linux, Solaris.

REFERENCES:

Prof. Vipin Kumar
 Dept of Computer Science,
 University of Minnesota, Twin Cities
 Minneapolis, MN, USA

Prof. Jaideep Srivastava
 Dept of Computer Science,
 University of Minnesota, Twin Cities
 Minneapolis, MN, USA