Vijay Rajakumar

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Personal Profile

I am an engineer at Bimaple Technology Inc, an early stage startup by UC Irvine Computer Science Professor Chen Li. Previously, I worked under Prof. Chen as a graduate student in the Information Systems Group. I worked on Interactive Query Suggestion and Auto-Completion on large scale systems. My interests are in information retrieval and databases. I have hands-on experience with engineering challenges in building fast search engines.

Education

University of California -Irvine Sep 2008 - May 2010
MS in Computer Science **GPA: 3.69/4.0**
Thesis: Interactive Query Suggestion.
Adviser: Prof. Chen Li

SSN College of Engineering, Anna University-India May 2004 - July 2008
Bachelor of Engineering(*Honors*) in Computer Science and Engineering 69%(no GPA system)
Senior Project: Parallel Biological Neuronal Network simulations using petrinets.
Advisor: Prof. N. Venkateswaran. Work published in Neuroinformatics'08.

Experience

Bimaple Technology Inc. Software Engineer
Irvine, CA Jun 2010 - Present
Designed and implemented the first vertical-search product of Bimaple. The live demo of the product is at (http://bimaple.com/demos).

iPubmed - Information Systems Group,UCI Graduate Student
Advisor: Prof.Chen Li, UCI Jul 2009 - May 2010
Designed and implemented **I**nteractive Query Suggestion in iPubmed (http://ipubmed.ics.uci.edu) as part of my MS thesis. Highlights are novel In-Memory, Trie based index structure in C++ with application residing on Apache-FastCgi server, talking AJAX/JSON through Python scripts.

Waran Research Foundation Student Programmer, Part-Time
Chennai, India, http://warftindia.org Sep 2006 - July 2008
Experience in Parallel Programming and Linux Cluster Administration. I implemented middleware to map scientific models to compute clusters using C++, Boost MPI. I wrote Python scripts to automate build testing and collecting performance stats for this middleware.

Technical Skills

Languages:	C, C++ (STL,Boost), Python, Java, Javascript
Databases:	MySQL, PostgreSQL, DB2
Operating Systems:	Linux, Windows
Application Server:	Apache HTTP, TOMCAT
Tools and IDE:	gmake, gdb, FastCGI, LingPipe, Eclipse, Matlab

Research/ Projects

Improving PubMed search using Topic Models Python
I implemented the following search engine components in Python: Tokeniser, Stemmer, Topic based indexing and browsing system of medical publications in PubMed.

Virtual World in HTML5 Javascript, AJAX
I designed and implemented a game-like tool to define real world building maps. Rendering the given map in 3D for navigation and leaving post-it like tags using only HTML5 over http.

Blind Man's Eye C++ -*Microsoft Imagine Cup*
Undergrad Team of 3 project to build a text recognition system using camera on mobile devices, to help the blind people. I implemented the image processing components using C++ and openCV. Project was selected as one of *Top 12 projects from India in Microsoft Imagine Cup'2006.*

Relevant Courses

Database Management, Information Retrieval, Analysis of Algorithms, Machine Learning, Image Understanding, Multimedia Systems Design, Scientific Computing, Probablistic Learning.