

SRIRAM SUBRAMANIAN

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EDUCATION

University of Wisconsin, Madison Aug 2007 - Present
M.S. in Computer Science; GPA: 3.8
Expected Graduation Date - May 2008

Birla Institute of Technology & Science, Pilani, India Aug 2001 - June 2005
B.E.(Hons) in Computer Science; GPA: 3.97

WORK EXPERIENCE

Summer Intern, NetApp, Sunnyvale, CA June - Aug 2008

- **Image Backup User Level Tool** to browse the image file generated by the ONTAP Image Backup tool. The tool runs on any linux system independent of ONTAP. It can selectively display specific portions of the image file and allows the user to browse through the image as well as various WAFL snapshots as though it was a regular filesystem. The tool shares code with the ONTAP kernel, but runs on the user level. The tool needs to be recompiled when IB code changes and it (almost) always starts working without requiring any rework. The original code had to be reorganized to support this feature.

Member Technical Staff, Database Security, Oracle India, Bangalore July 2005 - July 2007

- **Oracle Audit Vault** aims at helping enterprises achieve their regulatory compliance goals by consolidating (and archiving) the Audit Information from all over the enterprise.
 - **Alerts** are notifications that get fired when certain events occur. Involved in design and development of the alert evaluation and storage engine. Alert Creation and Evaluation involves translation of Alert Rules from Source Specific format to a Audit Vault Level generalized format. The translation process helps in creating a cache of data columns that are used in active alerts and faster evaluation of alert rules using the Oracle Rules Engine.
 - Design and Development of **Administrative Packages** and **Row-level Caching** of Audit Vault Schema. Administrative packages are employed to manage the various components of Audit Vault including audit sources, audit data collectors, audit data mapping etc. The read-only nature of this data can be exploited to improve performance by caching frequently accessed information.
 - As part of the development process, I also had to write extensive test suites in the ORATST framework of Oracle.
- **Oracle Fusion** - Oracle's next generation application development framework. Involved in development of lightweight users and XDB schema of Fusion architecture on Oracle 11g.

Research Intern, Insead Business School, Fontainebleau, France Jan - June 2005

- **NegoDeal** - Tool for simulating real-time games for the course Negotiation Analysis handled Prof Ayse Onculer. My work involved a transition from a quantitative to qualitative approach of handling the course, requiring several changes to interfaces and back-end of the tool that was developed in Delphi.
- **WebQuery** - Tool for extracting large volumes of data from lexis-nexis by simulating queries (*http post* and *get* requests) over the internet and analyzing their results. As lexis-nexis, the data provider, were moving their web interfaces, my worked involved moving the existing program to work with the new and more complex interface.

SELECT PROJECTS

Network Applications in the Voice-Over-Net Age

Jan - May 2008

In a typical deployment of VoIP service, various network appliances coexists with VoIP traffic. We identified the impact of different applications on VoIP performance and call quality. Jitter, call setup delays and packet loss were quantified by taking packet traces.

Electronic Voting

Jan - May 2008

Electronic Voting provides significant advantages over conventional voting, but poses several challenges as well. As part of this course project we explored the various security issues including establishing identities of voters, voting machines and the vote repository. We public key cryptography and Digital Certificates to developed a protocol that can satisfy these requirements.

Untangling ZFS Policies

Oct - Dec 2007

We observed and quantitatively measured some of the striking policies of ZFS including block allocation and aggregation, intent logging under synchronous and asynchronous workloads of varied sizes. To obtain meaningful data, we developed a pseudo-device driver to perform semantic block analysis.

Recovery Strategies in Main Memory Databases

Oct - Dec 2007

Designed and Implemented a simple multi-threaded main memory database based on a B+Tree with 2 phase locking, logging and transaction semantics, and studied the relative performance of two recovery strategies - recovery over network and recovery from check-point.

Cursive Handwritten Character Recognition

Jan - Mar 2003

Developed in C using ALLEGRO graphics library involving Neural Networks. Project involved tokenization of cursive writing followed by feeding inputs to a back-propagating neural network.

Performance Analysis of Web Caching Algorithms

Aug - Dec 2004

Analyzed the performance of various Cache Replacement Algorithms including FIFO, Least Recently Used etc by measuring the hit-ratios of these algorithms using the Squid Proxy Server.

WEPSIMS - Web Enabled Practice School Instruction Monitoring System

Aug - Dec 2003

Designed and implemented web-interfaces and Java software modules to help the Practice School Division monitor instructors at various industrial centers.

COURSEWORK

Graduate Coursework - Advanced Operating Systems, Topics in Database Management Systems Implementation, Advanced Computer Networks, Advanced Natural Language Processing, Introduction to Information Security

Undergraduate Coursework - Operating Systems, Computer Networks, Network Programming, Programming Languages and Compiler Construction, Theory of Computation, Database Systems

SKILL SET

Programming Languages: C, C++,Java(beginner)

Markup & Scripting: Perl, XML, HTML, JavaScript

Development Platforms: Windows, Linux, Solaris(beginner)

Databases: Oracle

ACHIEVEMENTS

Topper of Computer Science Batch of 2005 (comprising of 120 students)

Recipient of BITS Merit Scholarship awarded to the Top 10 students of each batch (consisting of about 850 students) for 7 consecutive semesters.