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SURESH SRIDHARAN

OBJECTIVE

Seeking a full time position dealing with design and development in the field of computer science, with a focus on systems.

AREAS OF INTEREST

Special interest in the areas of operating systems, computer networks and databases.

EDUCATION

May 2006 (Expected) — University of Wisconsin – Madison

M. S. Computer Science

- GPA: 3.75/4.0

June 2004 — Birla Institute of Technology & Science, Pilani

B. E. (Hons.) Computer Science

- GPA: 10.0/10.0

WORK EXPERIENCE

Jan 2004- Jun 2004 — National Semiconductor India Designs Pvt. Ltd.

Co-op Engineer

- Developed a memory manager to satisfy constraints of deterministic/fast allocation for real-time applications.
- Completed implementation of a hamming decoder for VBI teletext services, analyzed the execution time of code.

May 2002- July 2002 — Advanced Information Services Pvt. Ltd.

Summer Intern

- Developed a web chart drawing component using Object-Oriented concepts. Java and JSP were used for the project.

August 2004 - Present — University of Wisconsin - Madison

Teaching Assistant

- CS 302: Introduction to Programming (Java)
- CS 367: Introduction to Data Structures (Java)
- CS 640: Introduction to Computer Networks

COMPUTER SKILLS

- Operating Systems: Win98/NT/2k/XP, Linux, Unix

- Languages: C, C++, Java, SQL, Oracle PL/SQL, x86 Assembly, Verilog

ACADEMIC COURSES

- Advanced Computer Architecture – I (Fall 2005)
- Introduction to Algorithms (Fall 2005)
- Master's Research (Summer, Fall 2005)
- Advanced Operating Systems (Spring 2005)
- Advanced Networks (Spring 2005)
- Topics in Database Management Systems (Fall 2004)
- Introduction to Computer Networks (Fall 2004)
- Advanced Operating Systems (BITS, Pilani – Fall 2003)

PROJECTS

- **Implementation of a block device driver to enable writing checksum information along with block data (individual)**

  Currently working on the implementation of a block device driver which computes checksum over data blocks and writes that information to disk.

- **Implementation of a Framework for Detection of Processes and Threads in the Xen Virtual Machine Monitor (team of 2)**

  Instrumented the Xen Virtual Machine Monitor to infer information about the creation, switching and termination of kernel level threads. The effectiveness of the approach was measured by comparing against known events, and reasons for any deviations were analyzed.

- **Implementation and Evaluation of a Signature Detection Tool for Network Intrusion Detection (team of 2)**

  Implemented a signature generation tool (based on an earlier paper called Autograph) and measured how well it performs for large sets of attack data, after patterns were introduced in appropriate packets in the data.

- **Performance Analysis of Economic Approaches to Distributed Query Processing (team of 2)**

  Analyzed the performance of two different economic models with respect to load balancing and response time in distributed database systems. The simulation of these systems was implemented using threads and networking programming in Java. Also analyzed the complexity of faithful implementations of the schemes studied.

- **Optimal Route Finding Algorithms for Virtual Private Networks (team of 3)**

  Studied, developed and implemented algorithms for optimal route-finding in

virtual private networks with consideration for multiple QoS constraints. Solutions were targeted towards utilizing CPE (Customer Premise Equipment) based models as well as when functionality was included as part of the core router.

- **Application of Neural Networks to Text-to-Speech Conversion (individual)**

  Studied and Implemented feed-forward back propagation networks, a machine-learning technique towards solving problem of text to speech conversion. The implementation printed out the closest matching syllables corresponding to a given string of text.

- **Small Projects Done as Part of Courses**

  - Implemented algorithms for global state recording, causal ordering of messages, distributed mutual exclusion, load balancing, distributed shared memory and distributed file systems using programming environments and libraries such as MPI, Socket Programming, POSIX threads as part of course Advanced Operating Systems (BITS, Pilani).

  - Developed a compiler from scratch for a language called Cradle.

AWARDS RECEIVED

- Awarded Gold Medal of the Institute at BITS, Pilani for the Academic Year 2003 – 2004.

- Awarded Institute Merit Scholarship (awarded to top 10 students) at BITS, Pilani for 4 consecutive years.

- Placed among 0.1% of successful candidates in Physics, Chemistry and Informatics Practices, AISSCE 2000.

- Qualified to appear for the Indian National Chemistry Olympiad 2000 conducted by the Homi Bhabha Centre for Science Education (TIFR).

- Placed among 0.1% of successful candidates in Mathematics and Social Sciences, AISSE 1998.

- Qualified for the final round of interviews of National Talent Search Examination, 1998.