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Objective

A full-time position in research or software development with areas of interest in distributed systems, storage and operating systems. In particular, I am interested in the following areas:

- Scalable networked systems such as network storage and application services, and content dissemination.

- Large-scale distributed systems including clustered and wide-area P2P services, and mobile agents.

- Intelligent data management for Cloud-hosted enterprise services.

Education

Ph.D. in Computer Science (CPI 3.9)	1995-2004	Univ. of Utah, Salt Lake City, USA
Master's in Computer Science (GPA 9.14/10)	1992-94	IIT Kanpur, INDIA
Bachelor's in Computer Science (74%, ranked 4th out of 65)	1988-92	REC, Warangal, INDIA

Key Strengths

11 years of industry experience architecting and building mission-critical systems software including file systems and OS kernels since April 1994. Significant experience with FreeBSD, Linux, C, C++ and Perl.

5 years of industrial research and development experience formulating, evangelizing and executing advanced technology vision and roadmap for a large systems software firm.

3+ years of leadership experience mentoring junior to develop R&D execution and technical communication skills.

Passion for innovation with focus on real-world impact, and big-picture thinking.

Proven ability to generate innovative ideas independently, and to drive team projects within and across institutions.

Knowledge of the latest advances in distributed systems, especially distributed data management. Most of my research involved building and evaluating systems for real-world use.

Publications and invited talks in leading research conferences, and patents. On invitation, served as program committee member and/or peer-reviewed papers for premier conferences (ICDCS, FAST, Usenix, OSDI, HiPC).

Research Experience

Using machine-learning for Behavior Modeling, Diagnosis and SLO-based Storage Management (NetApp)

Improving the Reliability of Enterprise-class Services using Virtual Machine Technology (NetApp)

Dynamic Load-balancing in Clustered Storage Architectures (NetApp)

Wide-area Data Caching and Flexible Consistency Management (PhD thesis)

Simplifying Distributed Services through High-level Abstractions (PhD)

Flexible Hierarchical CPU Scheduling (PhD)

Tracking Modified Files in Large-scale File Systems for Fast Incremental Backup and indexing (Novell)

Operating System Kernel Extensions for Real-time Applications (Master's thesis)

Object-oriented Languages, C++-to-C Pre-compiler (Bachelor's thesis)

Industry Experience

As a senior member of NetApp's Advanced Technology (AT) group, played a central role in setting its goals, formulating its roadmap, growing the team both in the U.S. and India, and driving some of its projects and research relationships with premier universities. Specifically, proposed a next-generation data management vision and architecture for the company and evangelized it among senior directors and management. Currently leading its execution in collaboration with multiple business units. Developed a self-scaling performance modeling framework to help customers leverage NetApp products cost-effectively for SLO-based storage management. In the past, worked on leveraging virtual machine technology in robust storage server architecture, and scalable clustered storage services (pNFS). Also, helped design and execute several initiatives to nurture innovation and technical talent within NetApp aligning with corporate goals.

Independently designed and implemented major subsystems (file naming, compression, backup support) of an enterprise-class journalling file system at Novell Inc. that was later deployed in large customer installations.

Developed solutions to reduce the virtual memory footprint of an embedded microkernel for use in hand-held devices (IBM Austin). Worked extensively with low-level kernel components.

Provided technical training and consultation to an Indian company (TISL) on CMU's *Mach* micro-kernel.

Highlights

Publications:

Refereed conference papers in the areas of distributed object caching (ICDCS 2005, 1998, WCSSS 1999), data-driven analysis of storage systems (FAST 2010, ICMLA 2009, WASL 2008), clustered storage services (ACM Queue 2007), and OS scheduling (OSDI 1996).

Tutorial and invited talk at panel in HiPC 2009.

Patents:. 12 patents (2 patents issued and 10 pending).

Honors:

Served on Program Committee of ICDCS 2009 (data management track).

Peer-reviewed paper submissions on invitation for several conferences: ICDCS 2009, HiPC 2008, Usenix 2008, FAST 2006, Usenix 2005, OSDI 2003.

99.34 percentile in India's national entrance test for Masters' study in Computer Science (GATE 1992).

65th rank in state-level entrance test (Andhra Pradesh, India) for Undergraduate study in Engineering (1988).

Skills

Languages: C++, C, Java, Perl, PHP, Lisp, Prolog, VHDL, Intel x86 assembly, Motorola 680x0 assembly, PowerPC assembly, IBM/370 assembly.

Operating Systems: Various UNIX flavors (Linux, BSD, System V, SunOS4.1, AIX, HP-UX), OSF/1, MS Windows 2000, Novell NetWare, NetApp ONTAP.

Hardware platforms: Intel PCs, HP minicomputers, Sun 3, Sun Sparc 1, Sun/386, IBM RS/6000, AS/400, S/370, Apollo workstations, PowerPC-based machines (internal to IBM).

Protocols and Packages: TCP/IP, NFS, SUN/RPC, BerkeleyDB, Apache, X11, Synopsys VLSI design tools.

References

Available upon request.