SAGAR DIXIT

Chapin L2179 Ax, 700 Health Sciences Drive,
Stony Brook, NY 11790.
Contact no: 631 605 5370

Webpage: http://www.fsl.cs.sunysb.edu/~sagar/
Email Id: sagar.dixit@gmail.com

OBJECTIVE

Seeking a full time position which allows me to leverage my prior work experience and employ my technical skills in the areas of Storage and Distributed Systems.

EDUCATION

- Stony Brook University, USA.

MS in Computer Science (Graduation: Dec 2010) Current GPA = 3.75 / 4.0

Coursework: Operating Systems, Analysis of Algorithms, Network Security, Cloud Computing, Embedded Systems, Computer Architecture, Network Programming, System Security** *(* - current coursework)*

- Pune Institute of Computer Technology (PICT), University of Pune, India.

Bachelor of Engineering in Computer Science (June 2006) Major GPA = 3.62 / 4.0

PATENTS, PUBLICATIONS AND OPEN SOURCE

- *"Scaling Tiered Transactional Heterogeneous Storage",* submitted to 9th USENIX Conference FAST 2011.
- *"Exporting Kernel Page Caching for Efficient User Level IO"*, IEEE Conference MSST 2010. [Click here]
- *"Method for Policy Based and Granular Role Based Access Control"*, Freshpatents.com, 2010. [Click here]
- IBM Developer Works Articles
  - *"Secure RPC using DES Authentication on AIX"* [Click here]
  - *"Configuring EIM for AIX NFSv4 using Kerberos cross realm setup"* [Click here]
- *"Block based CDP module for Linux Kernel",* Open sourced on sourceforge.net [Click here]

TECHNICAL SKILLS

C, C++, Linux Kernel Internals, Knowledge of SAN/NAS, Distributed systems, Multi-tier storage systems, Multithreaded Programming, File System Development, Enterprise Security, GDB, Boost C++ Library, UNIX Shell Scripting, Python, Perl, RPC, Virtualization concepts.

RESEARCH EXPERIENCE (1+ year)

Working as Research Assistant at File Systems and Storage Lab, Stony Brook University
Supervisors: Richard Spillane (PhD student) and Prof. Erez Zadok

- **Cascaded Hierarchical Indexing of Sorted Lists (CHISL)** *Feb 10 - current*
  - Designed and implemented multi-tier storage (SSD, SAS, SATA, NFS etc) system software for high throughput indexing and caching of key-value pairs.
  - Developed multi-threaded cache oblivious look ahead array operations for above system.

- **OneFFS** *Dec 09 – Feb 10*
  - Designed and implemented a file system in Linux kernel that addressed the issue of write ordering in database/transaction oriented applications.

- The file system consisted of single big file to which applications *mmaped* and performed IO
- Added system calls to pin and unpin mapped pages in memory on which applications called *msync* in ordered fashion.

- **Other Projects** *Aug 09 - Nov 09*

- Developed shared memory based red-black tree for key-value pairs using Boost C++ library.
- Designed and implemented journaling feature for user level object store

---

INDUSTRY EXPERIENCE (4 years)

- ***Virtualization Intern at NetApp*** *May 10 - Aug 10*

Supervisors: Shravan Gaonkar (Advanced Technology Group)
Worked on project titled *Migration Planner* (Details confidential)

- ***System Software Engineer at IBM India Systems and Technology Labs, India***. *July 06 - July 09*

- Development in NFSv4 kernel and user level to support RBAC on AIX and Trusted AIX.
- Designed and prototyped a system for granular and policy based RBAC.
- Product ownership of NDAF and ONCRPC library.
- VMware Infrastructure 3 Certification with IBM Scale out NAS.
- Designed and implemented test suite for NFSv4 features like fs_locs, Identity Mapping.

- ***Intern at Qualex Systems Private Limited, India.*** *Aug 05 - May 06*

- Designed and implemented Block Level Continuous Data Protection in Linux Kernel.
- The backup phase provided physical data protection against disk crashes (similar to RAID).
- The recovery phase provided rollback in time feature for data restoration to any point in the past.

ACADEMIC PROJECTS

- Featherweight Cloud
- Enhanced Security in Ecryptfs in Linux Kernel
- Linux Cryptographic System Call in Linux Kernel
- TCP based peer to peer file sharing using Indexing
- SSL Performance Analysis

AWARDS AND ASSOCIATIONS

- Research Assistantship at File Systems and Storage Labs, Stony Brook.
- IBM Invention Achievement Award.
- IBM Ambassador Award for University Relations Activity.
- IEEE Student Member (2002 - 2006).
- Member of PICT Linux Users Group.

Prizes for the project: Continuous Data Protection Module in Linux Kernel

- Red Hat Scholarship worth Rs 50000 (June 2006).
- Finalist of National Level Project Competition at IIT, Kanpur, India.
- 1st prize in Storage Systems in National Level Project Competition at PICT College, Pune, India.
- 2nd prize in Open Software category in National Level Project Competition at DYP College, Pune, India.

References available on request