

Ankur Agrawal

251 Brandon Street #204, San Jose, CA 95134

ankuragr.engg@gmail.com

Phone: (+1)631-413-7685

Summary

- Experience with designing scalable cloud backup and recovery solutions.
- Extensive programming experience in major areas of an **Operating System** including *Bootloader, Virtual Memory Setup, Multiprogramming Setup, Interrupt and System call Setup, File Systems, Network Driver and Virtualization*.
- Experience in **File Systems** design and implementation on LINUX & Windows.
- Experience with **Dynamic Binary Instrumentation** of software for Security and Binary Translation Systems.
- Experience with design and implementation of **Virtual Machine Monitors** and **Hardware Emulators**.

Professional Experience

Axcient

Designation: Software Engineer. Advanced Development

- Development of Disaster Recovery As Service products. I write code for Scalable Backup, Recovery and Failover of Virtual Machines on VCenter and ESXi hosts over Cloud.

Intel Corporation

Designation: Systems Software Engineer. Binary Translation & Security Group

- **Dynamic Binary Instrumentation** of software for Security and Binary Translation Systems.

Riverbed Technology

Designation: Engineering Intern, Virtual Array Storage

- Reverse engineering **NTFS file system and MS SQL database** storage layout. Creation of **parser** for NTFS file system and MS SQL database and implementation of a **pre-fetcher** in order to pre-fetch data from data centers.

SUNY Research Foundation

Designation: Graduate Research Assistant

- C developer for projects sponsored by Computer Associates.

ORACLE India Pvt. Ltd.

Designation: Applications Engineer

- C++ and JAVA developer in FUSION Applications, Distributed Order Orchestration project. Was involved in Design and implementation of the middleware Scheduling and Reservation modules.

TATA Consultancy Services

Designation: Asst. Systems Engineer

- C and C++ developer in TUXEDO Middleware Migration Project and JAVA developer in Backend Automation Project.

Projects

- Design and implementation of **Bootloader, Virtual Memory Setup, Multiprogramming Setup, Interrupt and System call Setup, Polling based file system, Network Driver** for E100 Ethernet card for JOS.
- **Dynamic Binary Instrumentation** of software for Security and Binary Translation Systems.
- **Device Driver & File System** for Shingled Magnetic Recording (SMR) disks.
- Reverse engineering **NTFS file system and MS SQL database** storage layout. Creation of a **parser** for NTFS file system and MS SQL database and implementing a basic **pre-fetcher** in order pre-fetch data from **data centers**.
- Implementation of **GDB support** in GEM5 for x86 architecture.
- **Virtual Machine Manager:** Designed and implemented a prototype of Virtual Machine Manager for JOS (an academic Operating System)
- **Citation Based Patent Evaluation:** Developed a system for ranking patents based on their citation and self-citation scores using JAVA as programming language and MySql as database.
- **Cross Lingual Information Retrieval:** Design and Implementation of a prototype of multi lingual search engine.

Skills

- **Programming Languages:** C, C++ , JAVA, UNIX Shell Scripting, Python
- **File Systems & Storage:** NTFS, ext2, ext3, VMFS
- LINUX Kernel/User Space Programming
- **Emulators:** QEMU, GEM5
- **Android Internals & Application Development** (6 months)

Education

Stony Brook University	Stony Brook, NY
Master Of Science in Computer Science	Aug 2011 – Dec 2012
GPA: 3.6 on a scale of 4	
SASTRA University	Thanjavur, India
Bachelor of Technology in Computer Science	Jul 2004 – Jun 2008
GPA: 8.73 on a scale of 10	

Publications

- **“Language Independent Information Retrieval from Web”** at Third International Conference on Universal Digital Library (ICUDL 2007). The paper was based on the idea of a multi lingual search engine.
- **“To Shingle or not to Shingle: The Case for Shingled Disks”** at 4th USENIX Workshop on Hot Topics in Storage and File Systems, HOTSTORAGE 2012. This paper is under review currently.

Relevant Courses and Interests

- Operating Systems, Virtualization, Hypervisors, Storage Systems & File Systems, Advanced Operating Systems, Algorithms, Data Structures, Dynamic Binary Instrumentation

Certifications

- Sun Certified JAVA Professional (SCJP 1.5)

Personal

Languages Known	English & Hindi
Nationality	Indian
VISA Status	H1B
Date Of Birth	19-Aug-1986