

Gautam Kumar

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Education

- **Stony Brook University** New York, USA
MS, Computer Science (GPA: 3.6/4) *Aug 2013 - Dec 2014*
 - *Areas of Interest:* Algorithms, Operating Systems and Machine Learning.
 - *Courses taken:* Analysis of Algorithms, Operating Systems, Data Mining, Artificial Intelligence, Computational Geometry, Game Theory, Network Security.
- **National Institute of Technology** Calicut, India
B.Tech, Computer Science & Engineering (CGPA: 8.6/10, CS GPA: 9.1/10) *2007 - 2011*
 - *Relevant courses:* Program Design, Data Structures & Algorithms, Randomized Algorithms, Operating Systems, Distributed Systems, Databases, Computer Networks.

Work Experience

- **Commvault** New Jersey, USA
Software Developer Intern *May 2014 - July 2014*
 - Developed a Crash explorer tool for **Simpana** using Servlet, Ajax, JSP, JDBC, Apache and MySQL and deployed using **Docker-io**.
 - Developed infrastructure to integrate Red Hat Enterprise Virtualization with Simpana using C++ and Curl.
- **Oracle India Development Center** Bangalore, India
Member of Technical Staff *Jun 2011 - July 2013*
 - Worked on Oracle Database (RDBMS) layer called **VOS** (Virtual Operating System).
 - Enhanced the diagnosability by periodic dump of shared memory(SGA).
 - Suggested a single timer mechanism for RDBMS stack.
 - Added feature in Direct NFS (DNFS) to avoid ping flood, Added swap memory information of host machine's trace and enhanced the diagnostics by dumping permanent memory in ORA-4031.
- **Microsoft** Hyderabad, India
Software Developer Intern *May 2010 - July 2010*
 - Developed a web application based on MVC model, called Contract Management Tool.
 - **Technologies Used:** Silverlight 4, LINQ, W.C.F., C#.

Research Experience

- **Algorithms for Big Data** SUNY, Stony Brook
MS Thesis, Advisor: Rezaul Chowdhury *Dec 2013 - Present*
 - Working on Design and Analysis of Cache Oblivious and Cache Adaptive Data Structures and Algorithms.

- **Dynamic Load Balancing Through Live Migration of VMs**

NIT, Calicut

B.Tech Thesis, Advisor: Prof. Madhukumar S D

Jul 2010 - Apr 2011

- Designed and implemented algorithm for automatic live migration of virtual machines on sixteen node cluster with respect to the load (CPU, Memory and Network).

Course Projects

- **Operating Systems**

Stony Brook, NY

Class Project, Operating Systems

Aug 2013 - Dec 2013

- Developed a preemptive operating systems with basic system calls and support for standard input/output, memory management, process management and file system in C on Qemu emulator.

- **Movie Recommendation System**

Stony Brook, NY

Class Project, Data Mining

Aug 2013 - Dec 2013

- Developed a collaborative based movie recommendation system using K-means and K-NN algorithms.

- **Interactive KD-tree implementation**

Stony Brook, NY

Class Project, Computational Geometry

Jan 2014 - May 2014

- Implemented an interactive KD-tree which can be used for orthogonal search.

- **Prefetching of Disk Blocks**

Stony Brook, NY

Class Project, Operating Systems

Aug 2013 - Dec 2013

- Developed a prefetching algorithm using Markov model for constructing prefetch tree.

- **Simple Integer Language(SIL) Compiler**

Calicut, India

Class Project, Compilers

Jul 2009 - Nov 2009

- Engineered a compiler for a simple & strongly typed language (SIL) running on a hypothetical machine based on the MIPS machine architecture using Lex and Yacc.

Skills

- **Languages:** C/C++, Java, JavaScript, python, PHP.
- **Operating Systems:** Unix/Linux, Windows, Solaris.
- **Applications:** RDBMS, Eclipse, MySQL, Visual Studio.

Awards and Extracurricular Activities

- Secured an All India Rank 2140 (99.7 percentile) in AIEEE (All India Engineering Entrance Examination) and qualified for Merit List in IIT-JEE.
- Participated in Codechef(world level coding competition) All India Rank 350, Global Rank 650.
- Successfully completed Algorithms, Machine Learning and Game Theory courses with certificate on Coursera.
- Contributor profile on geeksforgeeks.org