

Sandhya Ramanarayanan

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Objective

Seeking internships in backend development or storage solutions in Summer '16.

Education

2015 - present **MS, Software Engineering**
San Jose State University

GPA: 3.76/4

2007 - 2011 **BTech, Computer Science and Engineering**
National Institute of Technology(Trichy)

Experience

Senior Member of Technical Staff, Oracle Inc., 2011-2015

Oracle ACFS support for databases - ASM cluster file system

- Built a C/C++ based test application to test sparse files on ACFS that starts a multiprocess/multi-threaded workload to create sparse files, test various types of I/O on holes and data blocks.
- Worked on developing stress tests for storing database files on Oracle ACFS. Designed and implemented test framework based on PL/SQL, SQL, shell scripts for different types of database workload generation covering data mining (using STAR schema,ETL,OLTP/OLAP,securefiles LOBs) and comprehensive testing of features across Oracle RDBMS, including data layer, recovery and backup, query execution and optimisation, filesystem throughput across various operating systems - Linux, Solaris, AIX, Windows
- Developed C++ extension stress test for ACFS plugins to calculate filesystem metrics using OOPS paradigm

Stress, Performance, Destructive Testing for Oracle 11g, 12c.

- Design/Development/Execution of multi-tier stress test suites simulating real-world customer scenarios to uncover Product defects and enhance product quality. Architect large-scale, high-load,massively concurrent end-to-end test applications to assess Oracle Database's scalability, reliability, availability and performance.

Exadata

- Worked on stress and performance testing of bundle patches for Exadata, ACFS support on Exadata, WBFC (write back flash cache) support for ACFS on Exadata, EHCC(Exadata Hybrid Columnar Compression) support for ACFS on Exadata, sparse diskgroups to store datafiles on Exadata.

- Cross functional testing of multitenant container databases (CDB), In-Memory, Compression, Data Guard, RAC, ASM on ACFS/Exadata
- RDS testing to measure database throughput on Exadata clusters.

Projects

Compliance Manager for the cloud (Oct'2015 - present)

- Real time management of compliances for cloud environment and deviation detections with respect to cloud security standards, alerting and recommendation engine for deviations, visualizing the compliance status based on roles. Implemented with AWS for the cloud, spark for the database, python for framework and D3 for the UI.

Priority-Based Flow control for Data Center Networks (Sep'2015-Present)

- Research study on PFC, PAUSE frames, Ethernet network congestion control mechanism and usage of PFC in Data centers.

Skill Set

Programming Languages	C, C++, SQL, PL/SQL, Python
Operating Systems	Linux, Solaris, Windows
Systems Strengths	Kernel, C++, Storage solutions, RDBMS