Balaji Subramanian

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Objective

Looking for full time senior software engineer opportunities in an organization nurturing innovation.

SKILL SET

- Programming languages: C, C++, Python, Golang
- Platform: Linux, FreeBSD and Solaris operating systems.
- Worked on MPI, UPC and SHMEM multiprocessor programming models.

Patents

- Processing I/O operations in parallel while maintaining read/write consistency using range and priority queues in a data protection system.
- Method to improve the I/O performance in a deduplicated storage system.

Awards & Achievements

- Earned Sun Microsystems Excellence Award for demonstration of technical skills.
- Earned EMC's Gold/Silver/Bronze Excellence award across multiple years for technical skills.
- Earned Rock Star award in Files team and Impactful engineer award across Nutanix engineering.

Work Experience

- Nutanix, Staff software Engineer,
  Nutanix Files, Oct 2016, San Jose CA
  - Architected, designed, developed and tested Nutanix Files Infra component decoupling with Nutanix Prism Element.
  - Architected, designed and developed shared memory stats collection framework to efficiently gather and store counters across protocols and services.
  - Worked on Shared memory cache framework to improve directory read performance for protocols.
  - Worked on metadata database performance optimization.
  - Designed and developed non-disruptive scaleup.

- Dell EMC Data Domain, Principal Software Engineer,
  DDFS Oct 2009 to Sep 2016, Santa Clara CA
  - Designed and developed parallel processing support in the Data domain file system to obtain optimal performance for random workloads.
  - Designed and developed a Reference cache to improve the latency for changed block tracking backups.
  - Worked on Content Store and Compression module to support newer workloads.

- High Performance Computing and Simulation Lab
  Programmer, University of Florida Sep 08 to Jul 09
  Parallel Performance Wizard for profiling UPC and SHMEMprograms.

  - Enhanced the Parallel Performance wizard to support automatic analysis systems for parallel Partitioned Global Address Space language applications.
  - Developed and implemented the I/O Manager for the profile and bottleneck analysis integration.

- Implemented a basic prototype of supporting UPC profiling inside eclipse PTP framework.

- Dell EMC Isilon Systems, *Software Development Intern, June to August 2008, Seattle, WA . Project profiles: Data Protection Group, clustered storage*
  - Designed and developed the support for daemon processes in user space fail point library allowing users to introduce fails points for child processes.
  - Designed and implemented the interface for the template functionality in user space fail point allowing the application to launch with configured fail points.

- Oracle Sun Microsystems,
  Member Technical Staff, March 2005 – August 2007, Bangalore India
  Project profiles: High Availability Cluster framework.

  - Spearheaded the development of supporting Oracle RAC10g version on Solaris cluster framework, one of the most needed projects for Solaris cluster.
  - Supported the Netra High availability Suite on Solaris 11, ensuring high service levels.

Education

- Master of science, Computer science, December 08
  University of Florida, Gainesville

- Bachelor of computer science and Engineering, May 04
  University of Madras, India

Other Activities

- Participated in hackathon events in Nutanix across multiple years. Winners of one of the hackathons for a project called AirFS (running Nutanix Files in cloud.)
- Completed EdX course for Quantum Computing Fundamentals for Beginners from MIT x Pro.
- Completed the full Coursera Stanford course for Quantum Computing for Data scientists and Engineers.
- Completed the coursera Stanford Machine learning basic course.
- Represented EMC's winning tennis team in Bay area inter company league.