

Vivitsu Maharaja

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Objective

To obtain a position where I can leverage and enhance my skills & experience while working on challenging problems in computer engineering & software development.

Education

Master of Science, Electrical & Computer Engineering May 2014
University of Florida, Gainesville, FL. **GPA:** 3.16/4.0

Bachelor of Engineering, Electronics & Communication May 2011
Dharmsinh Desai University, Nadiad, India. **GPA:** 62/100

Coursework: Computer Architecture, Parallel Computer Architecture, Distributed Computing, Autonomic Computing, Cloud Computing, Computer Networks, Communication Systems.

Skills

Knowledge of Data Structures and Analysis of Algorithms

Programming Languages: x86 Assembly, C, Java, Go, MPI, CUDA & L^AT_EX

Technologies: Hadoop, Riak, Redis, Git, Subversion

Experience

Advanced Computing & Information Systems Lab, University of Florida May 2013 - Present
Research Volunteer

- Developed a Java application that fetches JSON objects from a URL and adds them to Riak. Bucket creation, key management & interfacing with Riak are all managed by the application.
- Evaluated an Apache Solr system by benchmarking various parameters like indexing time, compression ratio, recall and the performance of the indexing algorithm.

Volansys Technologies, Ahmedabad, India November 2011 - July 2012
Embedded Engineer

- Developed a USB 2.0 (Enhanced Host Controller Interface) Host Controller driver in x86 assembly, as part of an application which allowed clients to PXE (Pre-boot eXecution Environment) boot via a network using an USB to Ethernet adapter.
- Enhanced the driver to manage the complete state machine of the controller including device detection, power management and data transfer.

Projects

Distributed File System *using Java* August 2013 - December 2013

- Designed and implemented a distributed, decentralized file system based on a peer-to-peer architecture
- Implemented consistency and fault-tolerance models to ensure high availability
- Designed and implemented a client module and an application that uses the file system to store data on a cluster
- Source code can be found at <https://github.com/vivitsu/Aether>

Web Service for Location Based Applications *using Go & Redis* April 2013

- Designed and implemented a secure web application that allows a user to view different resources on the web about his location, including Wikipedia links if the user is at a well-known point of interest.
- Created and managed a datastore that stored a user's account details, his location history & a POI database.
- Project source code can be found at <https://bitbucket.org/vivitsu/goserve>.

Distributed Fault-Tolerant Stock Exchange System *using Java & JGroups* April 2013

- Implemented a stock exchange system that used fault-tolerant, virtually synchronous replicas to perform stock trades.
- Enhanced the system so that client information, trade requests & stock data are preserved across node failures.

Gossip based Topology Management in Peer-to-Peer Systems *using C & Java* August 2013

- Implemented the T-Man gossip based topology management protocol for peer to peer overlay networks, which achieved various topologies for a cluster of nodes based on different distance functions.
- Enhanced the T-Man implementation so that it would adapt its topology at runtime to changes in the radius of the network.