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 — Expected graduation - 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, Distributed Computing, Cloud Computing, Computer Networks, Communication Systems, Parallel Computer Architecture, Autonomic Computing.

Skills

Knowledge of Data Structures and Analysis of Algorithms
Programming Languages: C, Java, Go, MPI, Cuda, x86 Assembly
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 Ethenet 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

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.
- 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 it's topology at runtime to changes in the radius of the network.

All source code, including the LaTeX source for this document can be found at `https://github.com/vivitsu`