Vivitsu Maharaja

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Education

Master of Science, Electrical & Computer Engineering — Expected graduation - May 2014
University of Florida, Gainesville, FL.
GPA: 3.37/4.0

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

Coursework: Computer Architecture, Parallel Computer Architecture, Computer Networks, Distributed Computing, Cloud Computing, Autonomic Computing, Virtual Computers.

Skills

Programming Languages: C, Java, Go
Technologies: Hadoop, Riak, Redis, Solr
Knowledge: Data Structures & Algorithms, Embedded Systems, Virtual Networks (VLANs)

Experience

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

- Developed a Java application that fetches JSON objects from a URL and adds them to Solr. Solr document creation & interfacing with Solr 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 *Embedded Engineer* November 2011 - July 2012

- 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.
- Developed a software feature for that would allow multiple broadcast domains in a wireless router to form a VLAN (Virtual LAN).

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 modular network management, file management and cluster management daemons to ensure consistency and fault-tolerance.
- Designed and implemented a multi-threaded client module and application that communicates with the file system and stores data on the 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. User account details, location history & a POI database were managed in Redis.
- 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.

Other projects include **Gossip based Topology Management in Peer-to-Peer Systems** *using C*, **DNS Server** *using Java RMI* & **Totally-ordered Multicasting using Lamport logical clocks** *using Java*.