Vivitsu Maharaja

1337 California St., Apt 7, San Francisco, CA ♦ (352) 278-5449 ♦ vivitsu.maharaja@gmail.com ♦
https://github.com/vivitsu

EDUCATION

Master of Science, Electrical & Computer Engineering — May 2014
University of Florida, Gainesville, FL. — GPA: 3.33/4.0

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

EXPERIENCE

Data Engineer, LendingHome, San Francisco, CA — Feb 2015 - Present

- Designed & implemented a framework to write data pipelines using a task queue. The task queue is designed to facilitate asynchronous, concurrent scheduling of tasks, each of which is a pipeline interacting with a data source. Using this framework, we were able to improve performance of our existing pipelines by more than 100%.
- Implemented data pipelines which funnel all of the organization's internal & external data into our data warehouse, which powers all internal reporting and analytics.
- Implemented API integrations with third party vendors that allow the application to fetch bank statements & tax documents for authorized users which helped partially automate the loan application process.

Senior Software Engineer, Applied Intelligence, IO Data Centers, San Francisco, CA — Sep 2014 - Feb 2015

- Developed a data processing pipeline using **Apache Pig** to model the power profile of a datacenter using accumulated sensor data, as part of a larger effort to develop a data analytics platform using the **Apache Hadoop** ecosystem.
- Implemented a Pig **UDF (User-defined functions)** library in **Java** as part of a 2 person team to handle custom processing of input data including parsing, datetime handling and calculating statistics.

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

- Developed & maintained a **USB 2.0 (EHCI)** driver, to allow clients on a LAN to boot using an USB to Ethenet adapter.
- Developed components to interface with the **PCI** & **BIOS** subsystems in order to manage the complete **state machine** of the host controller & maintain driver compatibility with adapters from multiple vendors.

PROJECTS

Distributed File System using Java — August 2013 - December 2013

- Designed & implemented a distributed filesystem with a peer-to-peer architecture & chunk based object storage.
- Developed software daemons to detect & react to node failures (fault-tolerance) & ensure data consistency.
- Developed a multi-threaded client application to communicate with the cluster and store data on the filesystem.

Performance Evaluation of Information Retrieval Systems using Java — November 2013

- Benchmarked the indexing time, compression ratio, recall & indexing algorithm of an Apache Solr retrieval system.
- Designed a schema to perform spelling corrections and clustering of records using Lucene's Tokenizers & Analyzers.
- Developed an application in Java to automate the record indexing process.

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

- Implemented a multi-threaded HTTP server using goroutines that serves webpages based on a user's GPS co-ordinates.
- Developed a multi-threaded client simulator which makes multiple HTTP requests to the server using goroutines.

Distributed Fault-Tolerant Stock Exchange Server using Java & JGroups — April 2013

- Implemented a stock exchange server 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.

Additional projects include **Gossip based Topology Management in Peer-to-Peer Systems** using C, **DNS Server using** Java RMI, **Totally-ordered Multicasting using Lamport's logical clocks** using Java, **Performance Evaluation of Open vSwitch & Linux Bridge**.

SKILLS

- Programming Languages: Java, C, Go, Python, Bash
- Experience with Apache Pig, ,Oozie, Flume, Hadoop, Redis, Riak, Solr, GNU Make, Apache Maven, Git & SVN.
- Knowledge of Data Structures & Algorithms, Embedded Systems, Virtual Networks.

COURSEWORK

Computer Architecture, Probability & Random Processes, Computer Networks, Distributed Computing, Cloud Computing, Autonomic Computing, Information Retrieval (Guided Research), Virtual Computers.