Lalith Vikram Natarajan

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EDUCATION

University at Buffalo, The State University of New York — *DEC 2016*
Master of Science in Computer Science *CGPA*: *3.62 / 4.0*

Anna University, Chennai — *MAY 2012*
Bachelor of Engineering in Computer Science & Engineering *WES Evaluated CGPA : 3.52 / 4.0*

SKILLS

Languages: Java, J2EE, jQuery, Python, R, PL-SQL, Shell scripting, C, HTML 5 & CSS 3, TLA+.
Frameworks: Spring MVC, Struts2, Hibernate, Bootstrap, JUnit, Hadoop, Solr, Elastic Search, RShiny.
Others: Java Design Patterns, MongoDB, Eclipse, Sublime, Vim, Blender, LaTex, *nix.

EXPERIENCE

Canvs TV — *MAY 2016 TO PRESENT*
Backend Developer Intern

- Synthesized and developed RESTful API endpoints in Java that provide multifaceted data leading to new customers and offering of quantified emotional Data as a Service (DaaS).
- Made queries in ElasticSearch, MongoDB, interfaced with Redis, the Kafka cluster and Storm topologies to extract data required.

General Sentiment Inc. — *DECEMBER 2014 TO JULY 2015*
Software Developer

- Improved the average response time of the SaaS application by over 20% through tuning of Struts2 and including data visualization modules using Bootstrap 3, HighCharts.
- Upgraded the distributed system cluster used for the processing of real-time media data from Hadoop 1 to 2 by rewriting and optimizing a number of Map Reduce jobs.
- Solved critical-production issues that occurred in the distributed database management system built on Cassandra.
- Delivered an optimum custom 3D modeler for Augrav.com using Blender and Sprite-Spin after prototyping on OpenGL, Blender, Pillow, Sprite-spin and Three.js.
- Proposed a new custom search solution using Apache Solr and worked on the prototype.

Verizon Communications Inc. — *AUGUST 2012 TO NOVEMBER 2014*
Software Engineer (Development)

- Collaborated with the OSP Engineering team on Java based web applications by coding modules and interfacing through web services.
- Optimized code for the Conversion/Conflation (of .dgn files) process and wrote shell scripts to automate manual processes.
- Took up the task of developing Struts modules for the PRS team by interacting with clients.
- Spearheaded discussions on the Fiber Management application (based on ArcGIS), built the Spring MVC layers and interfaces subsequently by adding multiple Java and jQuery modules.
- Developed spatial web modules using Oracle Spatial and ArcGIS built on top of the Dojo framework using the REST API.
- Created test cases using JUnit and solved critical issues during deployment of all these applications while mentoring a small team.

PROJECTS

OS/161 — *APRIL 2016*

Augmented a bare-bones OS/161 instructional operating system kernel to a full-fledged operating system by adding synchronization primitives, processes, file-system calls, process-system calls and virtual memory subsystem using C and GDB.

EDA and Parallel Processing — *MARCH 2016*

Over the course of a semester, worked on an UB specific dataset doing exploratory analysis using R, parallel data processing using Hadoop and data visualization using RShiny and Tableau.

Machine Learning Projects — *APRIL 2016*

- Built a MNIST dataset digit recognizer using Support Vector Machines and Neural Networks with 95%+ levels of accuracy in Python's scikit-learn.
- Implemented Linear Discriminant Analysis, Quadratic Discriminant Analysis, Linear Regression, Ridge Regression (normal and Gradient Descent) and Non-Linear Ridge Regression on the diabetes dataset in Python's scikit-learn.

Incident Search on Social Media — *DECEMBER 2015*

Using Apache Solr, Stanford NER & Yandex Translate API, social media data was indexed, tokenized and the web application hosted on Docker after implementing on Ruby on Rails with jQuery.

Formal Specifications of Distributed Algorithms — *DECEMBER 2015*

TLA+ and PlusCal were used to formally specify and validate Hybrid Vector Clocks, Dijkstra's 3 state and 4 state token ring algorithms.