Lalith Vikram Natarajan

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EDUCATION

University at Buffalo, The State University of New York
Feb 2017 (Expected)

Master of Science in Computer Science

CGPA: 3.585 / 4.0

Relevant Coursework: Fundamentals of Programming Languages, Information Retrieval, Distributed Systems, Machine Learning, Data Intensive Computing, Operating Systems, Data Mining.

Anna University, Chennai
May 2012

Bachelor of Engineering in Computer Science & Engineering

WES Evaluated CGPA : 3.52 / 4.0

RELEVANT EXPERIENCE

General Sentiment Inc.
December 2014 to July 2015

Software Developer

- Redesigned the consumer facing web application using Bootstrap 3 and Struts with the inclusion of a data visualization module for marketing analytics.
- Improved the average response time of the application by over 20%.
- Part of a two-member team that 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 MapReduce jobs.
- Solved critical-production issues that occurred in the distributed database management system built on Cassandra.
- Evaluated various technologies like OpenGL, Blender, Pillow, Sprite-spin and Three.js to create a custom 3D modeler for Augrav.com.
- Delivered an optimum solution using Blender and Sprite-Spin and hosted it using Flask.
- 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.
- Modified the NG ICGS web application code to handle DB merge and .DGN migration changes.
- Optimized code for the Conversion/Conflation (of .dgn files) process and wrote scripts used to automate this manual process.
- Took up the task of developing business modules for the PRS team by interacting with clients.
- Spearheaded discussions on the Fiber Management application for the European region (based on Esri's ArcGIS and Spring).
- Built the FM application architecture using Spring and coded multiple modules using Java and jQuery.
- Developed spatial web modules using Oracle Spatial and ArcGIS built on top of the Dojo framework using the REST API.
- Solved 300+ issues during deployment along with routine testing on all these applications and mentored a small team while supervising their work.

PROJECTS

Incident Search on Social Media
December 2015

- Designed a web-based search system to retrieve incident specific information by performing content tagging, faceted search and cross-document analytics on social data.
- Used Apache Solr, Stanford NER, Yandex Translate API to index and tokenize data. Implemented this on the Ruby on Rails framework with jQuery and hosted it on Docker.

Formal Specifications of Distributed Algorithms
December 2015

- Used TLA+ to write formal specifications of Hybrid Vector Clocks, Dijkstra's 3 state and 4 state token ring algorithms.
- Specifications included modeling of the algorithm, variant functions using PlusCal, model checking for invariant and stabilization properties.

Visual Speech Synthesis
April 2012

- Compared and implemented the two concepts of speech synthesis - morphing visemes and geodesic interpolation of visemes.
- Generated a user supplied custom face from a stationary image by optimizing the techniques used.

SKILLS

Languages: Java, J2EE, jQuery, Python, PL-SQL, Shell scripting, C, HTML 5 & CSS 3, TLA+.
Frameworks: Spring MVC, Struts, Bootstrap, Hadoop, Solr.
Others: Java Design Patterns, Git, JSON, Eclipse, Sublime, Vim, iPython, LaTex, Unix, Windows, OS X.