# Lalith Vikram Natarajan

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## EDUCATION

### State University of New York at Buffalo
*Feb 2017 (Expected)*

*Master of Science in Computer Science*

Fundamentals of Programming Languages, Analysis of Algorithms, Information Retrieval, Distributed Systems
Machine Learning, Data Intensive Computing
CGPA: 3.585 / 4.0

### Anna University, Chennai
*May 2012*

*Bachelor of Engineering in Computer Science & Engineering*

WES Evaluated CGPA : 3.52 / 4.0

## RELEVANT EXPERIENCE

### Krizda India Pvt. Ltd
*December 2014 to July 2015*

*Software Developer*

- 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.

### 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.
- Reduced 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 Data Services India Pvt. Ltd.
*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 and 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+.
Others: Java Design Patterns, Git, JSON, Eclipse, Sublime, Vim, iPython, LaTex, Unix, Windows, OS X.
Frameworks: Spring MVC, Struts, Bootstrap, Hadoop, Solr.