

Srikant Padala

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Summary

Software Engineer with 5+ years of experience in Data Analytics and Distributed Systems research and development. Hands-on experience with Big Data technology stack (HDFS, MapReduce, Graphlab, Spark, Storm). As a part of MS research, I have worked on scheduling and load balancing challenges in big data frameworks. I have one international publication in IEEE Bigdata 2015. I am currently employed by Samsung R & D Institute, Bangalore as a Senior Software Engineer. I am working on Samsung's Car mode android application development under the Intelligence and IOT division.

I am interested in building Big Data products, Large-scale Distributed Systems and machine learning applications.

Professional Experience

Senior Software Engineer July 2017 - Present

Samsung R & D Institute, Bangalore

Car mode application development

- This app enables a driver to safely use the phone while driving.
- Involved in upgrading the app for upcoming flagship devices.

Research and Teaching Assistant

August 2015 - June 2017

Department of CSE, IIT Madras

Project Associate

January 2014 - July 2015

Industrial Consultancy and Sponsored Research, IIT Madras

1. Optimizing Big data frameworks

- Researched the effect of disk contention on Job performance in Hadoop.
- Implemented a disk failure aware block placement strategy in Hadoop.

2. Developed DOS Lab Online DBMS Course website with PHP, MySQL, Bootstrap

Associate IT Consultant

September 2011 - December 2013

ITC Infotech India Limited

1. Friendz Social Network

- Built using ASP.NET, Microsoft SQL Server 2011, LINQ and Entity framework.

2. Development of Stock Flow (Cigarette) MIS Reporting tool (Spot Award)

Education

Program	Institution	%/CGPA	Year of Completion
MS by Research, Computer Science & Engg.	Indian Institute of Technology Madras	8.6/10	2017
B.Tech in Information Technology (WBUT)	Heritage Institute of Technology, Kolkata	8.33/10	2011
AISSCE (CBSE)	Bholananda National Vidyalaya, Kolkata	62.2%	2005
AISSSE (CBSE)	Bholananda National Vidyalaya, Kolkata	63.8%	2002

Publication

- Srikant Padala, Dinesh Kumar, Arun Raj, and Janakiram Dharanipragada. "**Octopus: A multi-job scheduler for Graphlab.**" In IEEE 3rd International Conference on Big Data 2015. (**BigData2015**), pp. 293-298. [Online]. Available: http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=7363767
- Srikant Padala and Janakiram Dharanipragada. "**Predicting Resources Requirement and Runtime of Graphlab Jobs.**" Accepted in 9th IEEE International Conference on Cloud Computing Technology and Science (**CloudCom 2017**).

Achievement

- Won 1st prize** in HiPC 2016 Student Parallel Programming Challenge - Intel track.
 - Work has been presented at the conference which was held from 19th through 22nd December, 2016 in Hyderabad.

Technical Skills

- Languages** - {C/C++, Java}-Proficient, {Linux Shell Scripting, SQL}-Competent
- API** - {Pthreads}-Competent
- Big Data Frameworks** - Apache Hadoop, Graphlab, Apache Storm, Apache Spark, Docker
- Web technology** - {HTML, PHP, JavaScript, MySQL, jQuery, CSS, XML, Bootstrap}-Working knowledge

- **Android application development** - Android Studio
- **Other tools** - Visual Studio, Eclipse IDE, g++, gdb, Git, L^AT_EX, gnuplot, Perforce.

Course Work

- **IIT Madras**
 - Cloud Computing
 - Parallel Computer Architecture
 - Topics in Design and Analysis of Algorithms
 - Advanced Programming Lab
 - Concurrent Programming
 - Advanced Data Structures and Algorithms
 - Introduction to Research
- **Coursera**
 - Machine Learning (Stanford)
 - Design and Analysis of Algorithms 1 (Stanford)

Academic Projects

- 1. Predicting Resource Requirement and Runtime of Graphlab Jobs** **January 2017 to June 2017**
MS Research Project *IIT Madras*
 - Predicts the resource requirement and runtime of Graphlab jobs in multi-tenant cluster using AI techniques.
 - Uses Regression techniques for jobs similar to past jobs, and hill climbing techniques otherwise.
- 2. Balancer using disk Latencies and utilization for Distributed File System** **January 2016 to December 2016**
MS Research project *IIT Madras*
 - Proposed a disk latency aware Balancer for HDFS.
 - HDFS blocks are moved from high latency datanodes to low latency datanodes.
 - Made changes in HDFS source code (Package: *org.apache.hadoop.hdfs.server.balancer*).
 - Upto 20% improvement achieved in job runtime when compared with default Balancer.
- 3. Octopus: A multi-job scheduler for Graphlab** **November 2014 to July 2015**
MS Research Project *IIT Madras*
 - Introduced multi-job support in Graphlab by incorporating an add-on scheduler.
 - We modeled scheduling algorithm as a variant of classical Strip packing problem.
 - In multi-job Graphlab, time sharing gives better turnaround times compared to resource sharing.
- 4. Scalable Parallel Minimum Spanning Forest** **July 2014**
Course project: Concurrent Programming, Team size: 4 *IIT Madras*
 - Implemented the Parallel Partial Prim algorithm using *Pthreads* to compute the minimum spanning forest.
 - Modified the GPU based algorithm to work for multi-core CPU.
- 5. Turn Based Row Buffer Locality Aware DRAM Scheduling Policy** **July 2014**
Course project: Parallel Computer Architecture *IIT Madras*
 - The scheduler tries to exploit the row buffer locality while keeping the fairness of a turn based strategy.
 - Simulated using USIMM simulator.
 - Achieved 5% performance improvement over existing FR-FCFS algorithm on an average.

Positions of Responsibility

- Teaching Assistant
 - Introduction to Database Systems, IIT Madras. (Aug 2015 - Dec 2015)
 - Principles of Software engineering, IIT Madras. (Jan 2016 - May 2016)
 - Introduction to Database Systems, IIT Madras. (Aug 2016 - Dec 2016)

Co-Curricular Activities

- Attended IEEE BigData 2015 conference (29 Oct 2015 to 1 Nov 2015) and presented "**Octopus: A multi-job scheduler for Graphlab**" in "Big Data Infrastructure" track, held at Hyatt Regency, Santa Clara, California, USA. Funding was provided by IIT Madras.
- Participated in "Google Design Sprint" hackathon in which we proposed the idea of Online account for credentials storage and sharing.

Volunteer Experience

- Volunteered for Samsung Seva notebook donation drive on August 17th, 2017

Objective

- To keep learning latest technologies and build great products by working with the best teams.