

CURRICULUM VITAE  
SRINIVAS AVIREDDY

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CURRENT STATUS	<b>Software Engineer</b> Backend Realtime Financial System Engineer - PAYPAL	<b>Jun '13 till date</b>
ACADEMIC QUALIFICATION	<ul style="list-style-type: none"><li>• <b>Under Graduation - B.Tech, IT</b> MIT, Anna University, Chennai <b>First Class with Distinction</b> (CGPA - 9.21)</li><li>• <b>Higher Secondary Education</b> <b>First Class with Distinction</b> (Aggregate of 95.5%)</li><li>• <b>Secondary Education</b> <b>First Class with Distinction</b> (Aggregate of 94.36%)</li></ul>	<b>2009 - 2013</b> <b>2007 - 2009</b> <b>2005 - 2007</b>
RESEARCH INTERESTS	My primary area of interest lies in <b>Cloud Computing</b> and <b>Big Data Analytics</b> . <ul style="list-style-type: none"><li>• Map Reduce and Data Parallelism.</li><li>• Predictive Analytics using supervised learning models</li><li>• Big Data Visualization.</li><li>• Web Security - SQL injection, DDOS attacks</li></ul>	
RESEARCH PROJECTS INVOLVED	<b>MITSAT-Automated Student Attendance Tracking</b> [CTDT Funded Project] Developed an automated student attendance Tracking system using Bluetooth and storage in a hybrid database comprising of MYSQL and MongoDB(NoSQL). Metadata storage was reduced by 50% and hybrid database reduced storage space by 60%.	<b>Aug '12 to Dec '12</b>
	<b>Framework for Heterogeneous Multi-core Systems</b> [UG Senior Thesis] Developed MR-API, a Comprehensive Map Reduce API framework for Heterogeneous Multi-core systems that taps underlying CPU + GPU resources for general purpose computing with an improvement in performance speedup of 40% as compared to CPU serial architectures .	<b>Oct '12 to Apr'13</b>
	<b>Filtering model to prevent DDOS Attacks in cloud</b> [Research Intern at SSE lab] Developed a timestamp based two level filtering model to prevent Distributed Denial of service attacks in a cloud environment. Proposed scheme significantly improved CPU utilization by 17% and Memory utilization by 42%.	<b>Apr '12 to Jun'12</b>
	<b>Randomized Encryption to prevent SQL injection</b> Developed a lookup table based randomized encryption algorithm called <b>RANDOM4</b> which was used to encrypt database fields and database entries to prevent SQL injection attacks.	<b>Dec '11 to Apr'12</b>
PUBLICATIONS	<u><b>Presented and Co-authored</b></u> <ul style="list-style-type: none"><li>• <b>MR-API: A Comprehensive API Framework for Heterogeneous Multi-core Systems using Map Reduce Programming Model</b> Srinivas Avireddy, Dr.Sumalatha R, et.al., presented at Student Research Symposium of the 19th IEEE/ACM High Performance Computing Conference, <b>HiPC 2012</b>, Pune, India.</li></ul>	

- **MITSAT-An automated student attendance tracking system using Bluetooth and EyeOS** Srinivas Avireddy, Dr.Varalakshmi Perumal et.al., presented at International Multi-Conference on Automation, Computing, Communication, Control and Compressed Sensing, **iMac4s 2013**, Kerala, India.

### Co-authored

- **Random4: An Application Specific Randomized Encryption Algorithm to prevent SQL injection** Srinivas Avireddy, Dr.Varalakshmi Perumal et.al., published in the proceedings of 11th IEEE International Conference on Trust, Security and Privacy in Computing and Communications, **Trustcom 2012**, Liverpool, United Kingdom.
- **A pioneer scheme in the detection and defense of DrDoS attack involving spoofed flooding packets** Srinivas Avireddy, Dr.C.Chellpan et.al., published in the Journal 'Transactions on Internet and Information Systems.
- **GAS: A Novel Grid Based Authentication System** Srinivas Avireddy et.al., published in the proceedings of 9th International Conference on Heterogeneous Networking for Quality,Reliability, Security and Robustness **Qshine 2013**, Greater Noida, India.

### CURRENT PROJECT AT PAYPAL

#### **Big Data Framework - Realtime Transaction Monitoring and alerting**

Developed a massive data processing workflow in Hadoop clusters using Map Reduce in Java followed by a realtime monitoring dashboard using d3.js and HighCharts. This significantly reduced time to identify and solve customer impacting issues from days to less than 2 hours.

### CERTIFICATION

Completed **Cisco Certified Network Associate** certification with score of 960/1000, May 2012.

### CODING EXPERIENCE

- Developed a clone of **DROPBOX** app as part of **Cloud Computing** project using C#, Python and MYSQL.
- Developed a web portal for e-Learning using PHP and MYSQL during my tenure as a web developer intern for the website **www.24X7onlinetutoring.com**.
- Designed a audio based web user interface using HTML, CSS and Javascript, for **Visually Challenged users** as part of the User Interface Design Project.
- Worked in building and validation of ISO8583 Financial transaction messages in C++ and Java,for two vendors connecting to PayPal.
- Developed an Rest API to crawl product reviews from ecommerce sites and applied sentiment analysis to compare various products listed in ebay.com.

### COMPUTER SKILLS

- **Programming Languages** - C, C++, C#, Java, Python
- **Databases** - Oracle 10g, MYSQL, MongoDB, Hbase
- **Scripting Languages** - HTML5, CSS, Javascript, JQuery, PHP, DJANGO
- **Cloud Computing Tools** - Hadoop, Eucalyptus, CloudSim
- **Big Data Technologies** - Hive, Scikit-learn, D3.js

TRAININGS &  
WORKSHOPS

- International Workshop on **Cloud Computing Applications** organised by Rajkumar Buyya, CLOUDS Laboratory, University of Melbourne, at High Performance Computing Conference, Pune, India, December 2012.
- Workshop on **Massive Data Analytics on Scalable Systems** at High Performance Computing Conference, Pune, India, December 2012.
- Workshop on **Power Management in High end IBM Multi-core systems** by IBM India at Madras Institute of Technology, Chennai, India, December 2011.

HONORS AND  
AWARDS

- Awarded the Second place in **Real Data Hackathon** conducted by **HackerRank**, India, 2014.
- Awarded Government of India Scholarship for the Complete 4 years of Under graduation for securing **Top 1 percentile** across the state in Tamilnadu State Board Examinations.
- Awarded the **Best Innovative Project Award** by CTD, Anna University among 57 other projects of all departments of Anna University, India, April 2013.
- Secured **1st Place in Research Idea Presentation event** in a National Level Technical Symposium hosted by College of Engineering Guindy - Anna University.
- Senior year thesis was accepted for funding under **IEEE student project grant scheme IEEE Madras Section**, India, December 2012.
- Awarded **Fellowship** to attend and present at the International High Performance Computing Conference **HiPC '12**, Pune, India, December 2012.
- Awarded a Medal of Honour for securing 100 % in Tamil Nadu State Government Examination for **Chemistry**.

EXTRA  
CURRICULAR  
ACTIVITIES

- Participated in Hackathons Conducted by PayPal, Hackerrank and Startup meeting conducted by PayPal and Frilp.
- Currently mentoring two of my Juniors in developing a supervised learning model to monitor vital parameters of Dialysis patients suffering from Chronic Kidney disease.
- Worked as a Volunteer in National Service Scheme to conduct Blood Donation Camps and Global Warming Awareness rallies(2009-2011).
- Worked as a Volunteer in ICRTIT 2012, a International IEEE conference on Recent Trends in IT hosted by MIT, Anna University.

CONTACT  
INFORMATION

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REFERENCES

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