**SILAMBARASAN MADANAKUMAR**

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**EDUCATION**

**Illinois Institute of Technology** **Chicago, USA**

*Masters in Computer Science with Data Analytics Specialization (GPA: 4/4)* December 2016 (Expected)

**Amrita School of Engineering** **Coimbatore, India**

*Bachelor of Technology in Electronics and Communication Engineering (GPA: 7.3/10)* May 2009

**TECHNICAL SKILLS**

Programming Languages: Python, Java, R, PL/SQL, LaTeX, C and C++.

Applications: Eclipse, MATLAB, Eagle PACE, Eagle STAR, Control-M and, Autosys.

Version Control: Git and SVN.

Database: Oracle 9i and 11g.

Platform: Windows, Linux, UNIX and Amazon Web Services EC2.

Web Development: HTML, CSS and JavaScript.

Languages: English, Tamil and Spanish.

Relevant Academic Courses: Machine Learning, Natural Language Processing, Data Mining

**WORK EXPERIENCE**

**Graduate Teaching Assistant** - Illinois Institute of Technology, Chicago **September 2016 - Present**

* Teaching Assistant for Dr. Yonshik Choi's Computer Networks - Fundamentals I course in Fall 2016 semester.

**Chair Webmasters** - TEDxIIT, Chicago **January 2016 - Present**

* Led Webmasters team ([www.TEDxIIT.com](http://www.TEDxIIT.com)) and coordinated with diverse team and ensured quick turnaround on tight deadlines.

***Research Assistant****-* Illinois Institute of Technology, Chicago **January 2016 - Present**

* Developing Python scripts for parsing C headers file to auto-generate C code for model simulation used in Smart Grid Systems for Dr. Alexander Flueck.

***Software Engineer*** - Hexaware Technologies, Chennai, India **May 2012 - July 2015**

* Developed and enhanced Bash scripts, Oracle database objects and Autosys jobs.
* Trained and mentored team of 6 in system related technologies and processes as the Technical Lead.
* Experienced in day-to-day data analysis of gigabytes of transactions data to ensure the data quality and handle exceptions.

***Systems Engineer*** - Tata Consultancy Services, Bangalore, India **February 2010- May 2012**

* Improved the data loading performance by 30% by replacing existing data feed design with new efficient design, preventing risk of SLA breaches.
* Automated monthly data feeds saving 8 workhours/month spent on the manual process to load the analytics data.

**ACADEMIC PROJECTS**

* Mining Brand Perceptions from Twitter Social Networks (under mentorship of Dr. Aron Culotta).
* Implementation of Animoto Clone– Client and Remote Workers on AWS EC2 Instance using DynamoDB and S3.
* Performance Evaluation of Terasort using Native Java, Apache Hadoop and Spark on AWS EC2 c3.large instance.
* Predicting Future Movie Ratings based on Social Media Buzz by performing Sentiment Analysis.
* Automatic Text Summarization using Lexical Chains for Natural Language Understanding.
* Link-State Routing algorithm implemented using Dijkstra’s algorithm in JavaFX.
* Determining Driver Fatigue Using Real-Time Non-Intrusive Monitoring implemented using SVM classifier.

**PUBLICATIONS**

* *Improved Eye Location Algorithm for Driver Fatigue Monitoring.* April 2009

National Conference on Recent trends on Communications & Signal Processing

* *Determining Driver Fatigue using Real-time Non-intrusive Monitoring (Best Paper in Signal Processing)* February 2009

International Conference on Optoelectronics, Information and Communication Technologies