Mahalakshmi Venkataraman
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EDUCATION

Master of Science in Computer Science and Engineering **Fall 2014 – Dec 2015 (expected)**

State University of New York, Buffalo

Relevant Coursework – Data Mining, Database Systems, Big Data Simulation, Rigorous Software Development Analysis of Algorithms, Modern Networking Concepts, Computer Security, Software Engineering, Machine Learning, Computer Architecture

Bachelor of Engineering in Electronics and Communication **August 2007 - May 2011**

Anna University, Chennai, India (First class with Distinction)

TECHNICAL SKILLS

Languages	: Java, JavaScript ,JQuery, C, C#, SAP, Python, Verilog , HTML , CSS,C/AL programming
IDE Tools	: Eclipse, Visual Studio, IPython, Xilinx, Sublime Text
Operating Systems	: Windows, Ubuntu
Technologies	: Bootstrap, ASP.NET, ADO.NET, Visual Studio CODED UI, AJAX
Database Tools	: SQL server, Berkley DB, ORACLE, Microsoft Dynamics NAV
Certification	: MCTS WCF services with .Net framework 4.0, SQL Server, Accessing data

PROFESSIONAL EXPERIENCE

Junior Programmer

Buffalo Wire Works, Buffalo NY **Aug 2015 - Present**

- Developed .Net systems that integrate with the company's ERP system – C#, JavaScript, JQuery, AJAX, C/AL code.
- Building a MVC e-commerce website integrated with MS Dynamics NAV ERP and SQL Server.
- Upgrading the ERP system from MS Dynamics NAV 2009R2 to MS Dynamics NAV 2015 (C/AL programming).
- Other responsibilities include developing webpages, barcode applications, creating web services, creating and maintaining servers, publishing websites and maintenance.

Senior Systems Engineer **Feb 2012 - July 2014**

Infosys Technologies Limited (P), Chennai, India

AVTAR – Advanced virtual Transaction Automation Robot

- Designed and developed the AI research project AVTAR - C# (.Net framework 4.0 CodedUI).
- This application was used for automating test bed executions across multiple platforms/engagements.
- Developed automation tools to speed up processes that need human intervention.

XConnectII

- Customizable web portal for internal and external customers to automate process flows spanning diverse capabilities like Project Initiation, Pipeline Management and Monitoring control.
- End to end project management tool. Stack: C#, ASP.NET, JQuery, JavaScript, SQL Server 2012.

NEON

- Project implementation and Deployment tool. Stack: C#, ASP.NET, JQuery, JavaScript, SQL Server 2012.
- Acted as the database architect for this project. Designed and implemented efficient schemas for fast retrieval of data.

ACADEMIC PROJECTS

Electronic Lock - Verilog **June 2015**

Programmed the FPGA BASYS2 board to work as an electronic combination lock that unlocks when entered the correct code. Implemented multiple timers to facilitate deactivation and pausing.

SQL Query Evaluator with Optimizations and Indexing - JAVA, Berkley DB **Feb 2015 - May 2015**

Designed a SQL query evaluator with support for select, project, join, bag union, group by, order by and aggregate operations. Optimized the same to support special join algorithms on Big Data in limited memory.

Handwritten Digits Classification using Artificial Neural Network - Python (Numpy) **Feb 2015 - May 2015**

Used Feed forward neural networks and backward propagation algorithm to study weights and classify digits. Achieved 97% accuracy .Implemented Naïve Bayes Classifier and Logistic Regression to classify MNIST datasets.

Simplified Distance Vector Routing Protocol – C **November 2015**

Implemented the Bellman-Ford equation to solve for the shortest route from a source to destination. Routers send distance vectors over UDP sockets and consequently they converge to form a network.

E-mail forensics with DKIM - C **October 2015**

Identified potential email spoofing by applying core DKIM algorithms. Used SHA-1 and SHA-256 digests with 1024/2048 RSA signing.

Hybrid Peer-to-Peer File Transfer Application - C (Ubuntu) **September 2015**

Developed an app replicating the working of Napster with minor differences. Multiple clients connect to a server through TCP sockets and can upload/download files from each other. Handles up to 3 downloads from 3 different clients at the same time.