**RENUKA RAJAN**

**Engineering Manager**

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D*e*veloper and manager, thrives in a fast paced environment. Passionate about leadership in technology and works to bring order to a chaotic environment. A developer who is not afraid to roll up her sleeves and get things working. Believer in experiential learning.

***Citizenship Status: Permanent Resident (No visa sponsorship required).***

***Highlights of Expertise:***

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| * Product Development
* Ruby on Rails 4
* Computer Vision
* Scala 2.10 (Coursera)
* AI/Machine Learning(Coursera)
* Reactive Programming(Coursera)
* Java Software Development (Java, JEE, Linux)
* OOP Design Patterns
* Project Planning Scoping & Management
* Agile, Iterative & Test-Driven Development,
* Continuous Integration
* Scheduling & Resource Planning
* Risk Assessment & Management
* AWS Kinesis
* AWS Rekognition
 | * Product Roadmap Development & Management
* Lean Manufacturing ProcessesProcess Automation & Improvement
* In-house / Offshore Team Leadership
* Rapid Prototyping
* Certified Scrum Master
* Mathematics for Machine Learning (Imperial College London Online 2018)
* Financial Investments (Research Interest)
* Product Showcasing (Cannes, France 2005)
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**PROFESSIONAL EXPERIENCE

Entrepreneurship -** Sept 2014 - Present
*Technologies Used: Lean Methodology for rapid prototyping, Neo4j, Machine Learning, Octave*

* Develop and prototype an application by combining the power of social and interest graphs to bring about a delightful experience in serendipitous content discovery.

Completed professional development courses at Coursera:
1. Machine Learning - Stanford/Coursera
2. Fundamentals of Scala - Coursera
3. Principles of Reactive Programming – Coursera

StemEd Labs (Non Profit Startup) April 2014 - March 2015
**Member, Board of Directors**

*Technologies Used: Assembly Language Programming, Data Structures, Algorithm Complexity
Responsibilities: Business Development, Technology Consultant*

* Leadership role in piloting a free college level summer program at a high school, preparing students in Assembly (MARS MIPS) Language Programming Fundamentals, Memory Organization and Addressing, Algorithms, Data Structures, Algorithm Complexity and Discrete Mathematics.   Key player in community outreach to schools serving economically challenged backgrounds and students with special needs. Committed to revolutionizing existing education standards by challenging rigid structures and providing free and high quality college level education to gifted and committed high schoolers.

**Entrepreneurship, Ruby on Rails Developer - Jan 2014 – Sept 2014**

* Entrepreneurial interest and incubation of innovative ideas arising from an interest to solve issues in health and education. Incubation of an idea in the field bio-medical devices - a device that predicts the onset of asthma attacks to provide opportunities for life saving, preemptive/preventative care.
* Establishing collaborative partnerships with fellow entrepreneurs in the bio-medical device field, and also a personal passion - education technology. Worked with an innovative team during EdTEch Startup weekend in Austin to develop a prototypical lesson planning tool for educators using Ruby on Rails.

Endplay Inc, Los Angeles, CA

**Technical Account Manager** 09/2012-01/2014

*Technologies Used: Javascript, JQuery, Subversion, Velocity, JSON, XML*Gather, analyze and document product requirements for a strategic client in digital media space using Endplay's Content Management System to develop custom software into tailored solutions for presentation of media content online. Retrain onsite staff on Velocity based SDK/ADK provided by Endplay for customization of the content management platform.

NOKIA LOCATION & COMMERCE (FORMERLY NAVTEQ), Chicago, IL

**Manager of Engineering,** 10/2006 – 08/2012
*Technologies Used:* *C++ (OpenCV), Java, Jira, Agile, Linux, Apache Wicket, Hibernate, Java Swing, GWT, Postgres, AWS (S3, EC2)*

* Lead team of local and offshore resources through development and testing of next-generation map building project; leverage computer vision algorithms to automate detection of map attributes from video and 3D data and capture €21M in projected productivity savings. Performed cost benefit analysis of use of in house data centers vs Amazon S3 for data storage and EC2 instances.
* Analyzed advantages and disadvantages of GP GPU compute resources with pipelining to improve compute speeds and therefore delivery cycles.
* Weighed pros and cons of employing Neural Networks based solutions for image processing vs OpenCV algorithms or similar solutions in conjunction with consulting faculty from University of Chicago.
* Manage development lifecycle of solutions spanning a wide spectrum of technology from AI to business computing(R&D of a Java based front end tool to execute, monitor and control the C++back end processes).
* Implement and encourage compliance with engineering practices such as continuous integration, automated deployment and test driven development to ensure quick turnaround and rapid software delivery to customers.
* Partner with Product Owners / Managers and Scrum Master to plan and negotiate scope of sprints and releases; identify inter-team dependencies and risk mitigation strategies, and ensure optimal utilization of team bandwidth and progress towards the automation goals.
* Manage budgets, statements of work (SOW) and 3rd-party vendor relationships. Oversee team development and performance, including recruitment, training, review, salary, promotions and conflict resolution.
* Analyze value streams to identify wastage and automate template manufacturing and tuning process, achieving cost-efficient, lean manufacturing with repeatable workflow.

***Key Achievements:***

* Hired and motivated highly qualified technical experts, including PhDs from top schools specializing in computer vision; led team to achieve high automation accuracy rates (90%-95%) and 250% increase in productivity over manual efforts.
* Established continuous integration and delivery environment to stage on-time delivery of incremental code changes for user acceptance testing (UAT).
* Defined best engineering practices to cultivate discipline in software engineering approach and increase confidence in stability of code throughout development life cycle.
Created three-year benefits realization roadmap that clearly illustrated development and production costs and time to market, providing effective framework for managing product owner and senior management expectations.

NOKIA LOCATION & COMMERCE (FORMERLY NAVTEQ), Chicago, IL

**Senior Software Engineer,** 11/2004 – 10/2006

* *Technologies Used: Java, Lucene, UNIX, Windows*Lead Developer and Project Lead on development, testing and delivery of Points of Interest (POI) product for German company; managed multiple, parallel project releases in collaboration with different functional groups.
* Established change request processes and prioritized changes for optimal use of time and resources. Scheduled resources, negotiated scope of requirements with customer, managed risks and coordinated team assignments to meet project deadlines. Trained associates in UNIX administration.

***Key Achievements:***

* Worked effectively with teams across Europe, India and the US to deliver product to customer on time; traveled to Netherlands location to deliver hands-on training and bring EU team up to speed
* Developed Navteq’s core geo-coding engine; implementation and re-factoring of Java and PL/SQL code bases. Championed unit testing processes to boost confidence in refactoring and improve regression testing.
* Pioneered and prototyped use of Lucene for full text search capabilities, and piloted use of Cruise Control to enable automated builds and regression tests as part of continuous integration development effort.
* Established continuous integration and delivery mechanism to create feedback loop that kept developers updated on customer requests.
Showcased system to customers at NAVTEQ European customer conference in France.

MCI, Downers Grove, IL

**Consultant (Software Engineer),** 4/2004 – 11/2004

* *Technologies Used:* *Java, J2EE, IBM Websphere*Played lead role in design and development of XML-based Web services that supported order entry workflow system at MCI; established effective liaisons with user base to facilitate timely UAT and product delivery.

AUTONOMY (FORMERLY INTERWOVEN), Chicago, IL

**Software Engineer,** 2/2000 – 11/2003

*Technologies Used: Java, CVS, Subversion, Linux, J2EE*

* Participated in server side product development of a Java-based Content Management Server; deliverables included database connection pooling code that enabled concurrency control and transaction management, EJB style entity beans that provided container managed persistence, and multi-threaded server-side code for processing TCP-IP based client side connections and requests.

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*Additional experience at Citicorp Information Technology Industries, and as* ***Consultant***  *at Information Resources, Inc.*

**EDUCATION AND TRAINING**

**MASTER OF SCIENCE IN COMPUTER SCIENCE – 2003**

ILLINOIS INSTITUTE OF TECHNOLOGY, Chicago, IL

***Professional Certification & Training***

Certified Scrum Master ~ Behavior Based Interviewing ~ Management Excellence
~ Effective Presentation Skills ~ Cultural Awareness ~ Release Train Planning (Dean Leffingwell) ~ The Coach Approach (Employee Coaching & Performance Review Training)

How to be an Effective Functional Manager in an Agile Environment (Esther Derby)

~ Stanford Machine Learning Coursera