# SHYAMSUNDER RAMAKRISHNAN

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### **EDUCATION**

Master of Science, Computer Science

North Carolina State University, Raleigh, NC

**Bachelor of Engineering, Information Technology** 

University of Mumbai, India

**Expected May 2018** 

GPA 3.7/4.0

May 2014

GPA 3.8/4.0

Relevant Coursework: Data Structures, Algorithms, Operating Systems, Computer Networks, Software Engineering, Cloud Computing, Automated Learning & Data Analysis, Algorithms for Data Guided Business Intelligence, Software Security

#### **TECHNICAL SKILLS**

Languages: Java, Python, C#, R

Web Technologies: Spring MVC, Node.js, AngularJS, ASP.NET MVC, Ruby on Rails, HTML5, CSS3, jQuery, Ajax, Bootstrap

Database Technologies: MS SQL, MySQL, Oracle 11g, Apache Cassandra

Tools: Ansible, Docker, Jenkins, Maven, Selenium, ElasticSearch, Logstash, Kibana, Apache Spark, Tensorflow, Amazon AWS

#### **WORK EXPERIENCE**

## **Software Engineering Intern**

#### **Cisco Systems, Research Triangle Park**

May 2017 - Aug 2017

- · Worked with the Cloud Collaboration team to Implement Cisco Spark call failure analysis using machine learning
- Built a GPU server and setup the model training and prediction workflows to perform real time call failure classification
- · Worked on troubleshooting issues, bug fixes, automation scripts and REST API performance tests for Cisco Spark Call
- Technologies used include Linux Bash, Python, Docker, ElasticSearch, Kibana, Apache Spark, Maven, Cassandra

## **Software Developer**

# Tata Consultancy Services, Mumbai, India

Sep 2014 - Jul 2016

ABN Amro Bank, UK – Global Treasury

- Implemented a Forex and Money Market deal capturing system for Treasury traders using ASP.NET MVC framework
- Enhanced Treasury system for additional Savings products, remodeled MVC code and optimized transaction workflow
- Developed an automation tool in C# for upgrading CRM application which reduced turnaround time by 540 man-hours
- Customized a workflow system in Spring to trigger scheduled EOD notifications on bank's balance and currency positions
- Served as a lead developer, held design discussions with clients and ensured timely software solution deliverables

#### **Programming Intern**

# **NCSU Office of Information Technology**

Jan 2017 - May 2017

- Worked on implementing OIM as NC State's central infrastructure that handles user Identity and Access Management
- · Involved in IDM data migration to Oracle 11g database and performed application testing using Jenkins

## **SELECT PROJECTS**

Slack DevOps Chat Bot - VMOps (NodeJS, Vagrant, Ansible, Amazon AWS, CloudWatch)

- · Developed a conversational slack bot to configure and manage remote virtual machines on AWS servers using Ansible
- Implemented features for users to spin up VMs, monitor resource utilization, merge VMs and shrink VM resources

Performance Analysis of Containers and VMs for Cloud Applications ( Docker, VirtualBox, Grafana, OpenNMS )

- Analyzed performance of Docker containers vs Type 2 hypervisor based VMs for compute and data centric cloud apps
- Performed benchmark tests for CPU, memory, disk I/O metrics; rendered real time comparison using OpenNMS, Grafana

# Open Source Contribution - Security Analysis and Risk Mitigation of OpenMRS

- Performed threat modelling, static and dynamic analysis of OpenMRS app using HP Fortify, OWASP ZAP and Burp Suite
- Developed code fixes of risk mitigations, contributed to public repository and presented a complete risk analysis report Reliable File Sharing System over UDP ( Python, C++ )
- Developed a file sharing system using Go-back-N with automatic repeat request and Selective Repeat ARQ over UDP
- Implemented retransmission scheme, timeout and checksum to ensure reliable and efficient UDP data transfer

# Twitter Sentiment Analysis ( Python, Apache Spark, Kafka, D3.js )

- Processed live Twitter feeds on specific events using Spark streaming APIs, queued and buffered streams using Kafka
- Analyzed tweets on the context of positive or negative reactions using classifiers, rendered graphical analysis using D3.js

# Open Source Contribution – Feature Addition to Expertiza LMS ( Ruby on Rails, Google Drive API, Heroku )

- Added a collaborative assignment review feature to Expertiza Learning Management System using Google Drive API
- Enabled users to collaborate on assignments in goodle docs with appropriate access levels and maintained peer reviews

## AWARDS & RECOGNITION

- Achieved a jury award of Second position at LexisNexis Rise to Code 2017 Hackathon
- Certificate of Excellence on client nomination at Tata Consultancy Services for proficient application development