SINDHU BALAKRISHNAN

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EDUCATION

North Carolina State University — GPA: 3.48/4.0
Master of Science in Computer Networking — December 2016
Courses: *Algorithms, Advanced Data Structures, Object Oriented Design and Development, Computer Networks, Data Intensive Computing, Advanced Database Management Systems and Software Engineering*

Anna University, India — GPA: 9.25/10
Bachelor of Engineering in Computer Science — May 2012

TECHNICAL SKILLS

Programming Languages: C, C++, Java, JavaScript, PHP, Python
Web Technologies: HTML, CSS, XML, JSON, AJAX, JSP**,** REST
Big Data: Hadoop, MapReduce, Apache Spark, Apache Kafka
Tools: Git, SVN, Putty, AWS, VCL, Matlab, Android, WordPress
JS Libraries: JQuery, AngularJS, Ionic
CSS Frameworks: Bootstrap, LESS, Sass
Databases: MySQL, MongoDB, Oracle
Operating Systems: Windows, Linux

WORK EXPERIENCE

NCSU Graduate School Office | Programmer (May 2015 – Present)

- Currently working in the software development team building web applications and management software tools used by the NCSU Graduate School.
- Developed PHP and Java web applications to automate tuition computation and faculty evaluation that run ETL jobs to fetch data from an Oracle database and makes it available to users through web applications.

Payoda Technologies, India | Software Engineer I (June 2012 – October 2014)

AppViewX – Networking Product

- Involved in an agile development team building a software load balancer called AppViewX and worked in various modules including Application Topology, Change Management Automation, Centralized Device Reporting, Configuration Management and Migration.
- Built dynamic dashboards and widgets for network monitoring and analysis and worked in various modules creating data visualizations of devices and device statistics for big data analytics.
- Built custom web components to dynamically create device templates driven by user-defined XML.

User Experience

- Involved in the UI Development team creating responsive websites for desktop and mobile applications.
- Experienced with cross browser development and testing of web applications.

ACADEMIC PROJECTS

Restaurant Reviews' Aggregator using Python

- Built a web crawler that fetches restaurant reviews from the top review sites and presents them to the users through a web application, android application and a chrome plugin. The effectiveness of the three solutions were also analysed with the help of user surveys and feedbacks.

Semantic topic subscription using Apache Kafka

- Worked on a research project to incorporate changes in Apache Kafka to semantically subscribe to topics and implemented a time API to calculate the time taken by Kafka to process the messages.

Topic Classification of News Articles using Hadoop and Apache Spark

- The project aims to build a real-time, distributed application that classifies news articles using the random forest classification algorithm. The classifier model is generated with huge datasets obtained from BBC. The application was implemented and hosted in AWS.

Disk-Based Merge Sort using C++

- Implemented a disk-based merge sort algorithm to sort large data inputs that exceed memory size. The algorithm creates a series of sorted runs that are merged using tournament sorting algorithm.

In-Memory Indexing with Availability Lists using C++

- Investigated the use of field delimiters and record sizes for field and record organization. Used an in-memory availability list to support the reallocation of memory used by deleted records to improve search efficiency.

Virtual Network with end-to-end data delivery using Matlab

- Implemented a CSMA/CD Medium Access Control scheme and Link State Routing Protocol based on Dijkstra's algorithm to deliver data between any pair of end nodes in a network.

Android Mobile Application in Java

- Developed an Android mobile application that would facilitate our college students to create study groups and plan group meetings by reserving a room at the NCSU Hunt Library.

Peer-to-Peer System with Centralized Index in Java

- A multi-threaded application that facilitates exchange of files between clients in a peer-to-peer system where one of the peers acts as the centralized server.