NAMRATA SIVAKUMAR

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EDUCATION

*THE UNIVERSITY OF TEXAS AT ARLINGTON* | Master of Science, Computer Science, GPA 3.33

*May ’19 (Expected) | Arlington, Texas*

*Specialization: Software Engineering and Databases/Big Data*

*Programming Coursework: Algorithms and Data Structures, Software Engineering Management, Web Data Management, Networks, Software Testing, Cloud Computing & Big Data, Database Systems, Secure Programming, Python Programming*

*ANNA UNIVERSITY* | Bachelor of Engineering, Computer Science and Engineering, GPA 3.3

*May ’17 | Chennai, India*

*Major Coursework: Operating Systems, Theory of Computing, Computer Architecture, Programming Languages*

TECHNICAL SKILLS

* Languages: C++, Java, Python, HTML5, CSS, JavaScript(ES5), PHP
* Back-End and Technologies: SQL, Oracle, MongoDB
* Big Data Frameworks: Hadoop, Spark, Pig, Hive, Storm
* Applications: Eclipse, Atom, Visual Studio Code, Sublime, Brackets, Spyder, Jupyter Notebook
* Frameworks/ Libraries: ReactJS, Bootstrap 4, CodeIgniter, Flask, RedisClient
* Virtualization Tools: Vagrant, VirtualBox, RedHat
* Software Testing Tools: JUnit (ParamsRunner and Parameterized), JaCoCo, EasyMock, PIT
* Operating Systems: Windows, MacOS, Linux
* Version Control: Git, Github, BitBucket
* Other Key Skills: OOPS, UML, MVC, REST

WORK EXPERIENCE

*Intern | HCL Technologies*

*Summer‘15 | Chennai, India*

* Developed a “customer retention and feedback” application in Java using Swing classes, Java Database Connectivity API using Oracle 9i for Database Connectivity.
* Assisted in Software Documentation, Object Oriented Design of the project by developing UML diagrams in Rational Rose and StarUML, Project Planning using Work Breakdown Schedule and Microsoft Project Plan.
* Assisted in maintenance, compliance of the application by performing root cause analysis using tools.
* Leveraged Knowledge: Object Oriented approach, Unit Testing of Software, Software Documentation, Root Cause Analysis

PROJECTS

* Instant Money Transfer Web Application

*Spring’19 | University of Texas at Arlington*

Developed a web application using NodeJS, ReactJS, StripeJS and Relay for transferring money using a digital wallet. Registered users of the application have the ability to add bank accounts, credit/debit cards to the wallet. MongoDB and GraphQL were used for the application’s backend. The focus of this project is to find security vulnerabilities of the web application and how it can be remodeled to prevent attacks. This is a close replica to “SquareCash”.

* Processing Live Tweets from Twitter4j API

*Fall’18 | Personal Project*

Developed the project in Java using Python’s micro server called FLASK to process tweets using public Twitter4j API stream in Apache Storm. This program calculates the top/trending keywords using topologies such as SPOUT, BOLT for parsing the tweets and counting the keywords. Vagrant and VirtualBox were used to implement this in an Ubuntu platform. This is an application which is a close replica to programs which calculate ‘trending’ in similar platforms.

* K-Means Clustering in Java

*Fall’18 | University of Texas at Arlington*

Java program for centroid clustering using K-means clustering was implemented on the Comet cluster that is a cluster dedicated to the class by the SDSC (San Diego Supercomputer Center). A set of points are used to find the closest centers by which a centroid is assigned to each cluster using the Lloyd’s algorithm. The goal is to partition a set of points into k clusters of neighboring points.

* Graph Partitioning using Apache Spark and MapReduce

*Fall’18| University of Texas at Arlington*

Built a program in Java and Scala that partitions a graph into K clusters using multi-source BFS (breadth-first search). It selects K random graph vertices, called centroids, and then, assigns the centroid to its unassigned neighbors. These programs reinforce the fact that Spark with Scala runs programs 100x faster than MapReduce (Java) since it does the processing in the main memory of the worker nodes and prevents the unnecessary I/O operations with the disks.

* Pet Store Information Website

*Fall’18| University of Texas at Arlington*

Developed a website using CodeIgniter Framework using XAMPP for a localhost. Corresponding controllers, models and views were used to implement emailing of new users with their username and password, registration of new users by inserting data into the database, retrieving information about their respective accounts. The website will enable the clients and businesses to have an account and access their pet’s account.

* Responsive Website for a Local Business

*Fall’18| Coursera*

Established a responsive website for a restaurant using HTML, CSS, Bootstrap 4 and Node developed in Visual Studio Code. The website consists of interactive forms and the provision for the customers to book a table in advance, information about the menu. Bootstrap helps give the website the boost of interactive forms and pop-ups to provide the user with a new-age experience. NPM packages help the website building easy by giving an auto-update to the browser without refreshing.