NAMRATA SIVAKUMAR

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EDUCATION

*THE UNIVERSITY OF TEXAS AT ARLINGTON* | Master of Science, Computer Science, GPA 3.5

*May ’19 | Arlington, Texas*

*Specialization: Software Engineering and Databases/Big Data*

*Programming Coursework: Algorithms and Data Structures, Data Analysis and Modelling Techniques, 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, Computer Networks*

TECHNICAL SKILLS

* Languages: C++, Java, Python, HTML5, CSS, JavaScript, PHP
* Back-End and Technologies: SQL, Oracle, MongoDB(NoSQL)
* 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
* Cloud: Amazon Web Services (AWS), Google Cloud Platform (GCP), Netlify, Heroku, Ngrok
* Other Key Skills: OOPS, UML, MVC, REST API

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.
* Leveraged Knowledge: Object Oriented approach, Unit Testing of Software, Software Documentation, Root Cause Analysis

PROJECTS

* Web App using Python

*Spring’19 | Individual Project*

Developed a web application for a restaurant using Flask (Python’s micro framework) and deployed it to the Google App Engine. Standard languages for the web such as HTML and CSS were used apart from Python. The website enables visitors to know the restaurant’s location, menu and also book a reservation in advance. Flask follows a minimalistic design and therefore gives seamless performance to the website.

* Instant Money Transfer Web Application

*Spring’19 | Team Project*

Developed a full-stack web application using 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 during the development process.

* Processing Live Tweets from Twitter4j API

*Fall’18 | Individual 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 | Individual Project*

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| Individual Project*

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| Team Project*

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.