BHARATH KUMAR BANDARU

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EDUCATION

Master of Science, Computer Science May 2023
Arizona State University, Tempe, Arizona 3.96 GPA
Coursework: **Cloud Computing**, Fundamentals of Statistical Learning, Deep Learning, Multimedia & Web Databases, **Distributed Database Systems**, **Data Visualization**.

Bachelor of Technology in Computer Science and Engineering May 2019
National Institute of Technology Karnataka, Surathkal, India 3.5 GPA
Coursework: Operating Systems, **Data Structures and Algorithms**, Design and Analysis of Algorithms, Object Oriented Programming, Database Management Systems, Data Warehouse and Data Mining, **Distributed Computing**.

PROFESSIONAL EXPERIENCE

Software Engineer (Full Stack Developer) Aug 2019 – Jul 2021
Fidelity Investments, Bangalore

- Managed development, modification, and maintenance of over 10 **Java Spring Boot** applications for equity trading business requirements while addressing production issues.
- Contributed to the migration of **Java** and **Scala** applications to **AWS**.
- Improved a **Scala** automation application, reducing manual effort for traders by **1-2 hours** per day.
- Created **40+** automation test cases for two REST APIs to verify and validate application workflow.
- Increased traders' work efficiency by more than **10%** by improving the **Java Spring Boot** application's handling of stock orders.
- Reduced production issues risk by **5%,** by implementing an **AWS Lambda** function in **Python** that identifies errors from automated scheduled jobs and alerts the corresponding team management.

ACADEMIC PROJECTS

Video and image classification in cloud infrastructure Aug 2022 – Dec 2022

- Developed a **Python** application that performs face recognition from the video files and is configured on AWS.
- Utilized AWS services like **S3**, **DynamoDB** and AWS **Lambda** for storing and retrieving information and classification results of the input videos.
- Designed custom **auto-scaling** logic to manage the app-tier instances based on the requests' volume.

Multimedia data experimentation using feature extraction and classification Aug 2021 – Oct 2021

- Developed a **Python** application that extracts facial features and determines the similarities using distance functions (Manhattan, Euclidean & Cosine).
- Performed dimensionality reduction techniques like Principal Component Analysis (PCA), Singular Value Decomposition (SVD) and K-means clustering algorithm to identify significant features in the images.
- Using the discovered latent features, the dataset images were indexed and classified by applying Support Vector Machines (SVM), Decision trees (DT), and Locality Sensitive Hashing (LSH) file techniques.

Sentiment Analysis using Neural Network Roberta transformer Aug 2021 – Dec 2021

- Trained and experimented with the Roberta model uisng Amazon, IMDB and Twitter data in **Python** improving the model's accuracy by approximately 3% for general text categorization..
- Analyzed the performance of the deep learning model by comparing it with machine learning models like Naïve Bayes and SVM on various metrics.

Visualization of the occurrence of future public events from social media data Aug 2022 – Dec 2022

- Developed a visualization system utilizing **D3.js** and **JavaScript**, based on the work of Isaac Cho et al., that includes an interactive dashboard with interconnected components to analyze future events and explore event relationships based on various indicative parameters.
- Utilized the Twitter API to extract tweets and applied text preprocessing techniques such as tokenization and lemmatization to normalize the data and using entity extraction techniques to extract date and location information of events from tweets.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, TypeScript, JavaScript, Scala
Operating Systems: Linux, Windows, OS X
Design: Object Oriented Development, Service Architecture
Tools: Maven, Jira, Jenkins, Datadog
Frameworks: Angular, Flask, Spring boot, Android Studio, Apache Spark
Version Control Systems: Git, GitHub
Technologies: HTML/CSS, Node.js
Databases: SQL, PostgreSQL
Cloud Platform & OS: AWS, Linux, Windows