Karneeshwar Sendilkumar Vijaya

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Education

The University of Texas at Dallas Dallas, TX
Masters of Science in Computer Science *August 2021 - May 2023*

National Institute of Technology, Tiruchirappalli Trichy, India
Bachelor of Technology in Engineering *August 2013 - June 2017*

Relevant Experience

Copart, Inc Dallas, TX
Software Engineer Intern (Data Platform) *September 2022 - Present*

- Developed a scalable Spring application from scratch enabling CRUD operations for Key Performance Indicators (KPIs) stored in a GCP bucket. Implemented advanced Spring Security with JWT authentication to ensure secure user authorization, granting CRUD access to privileged users and read-only access to other allowed users. Leveraged Dockerized containers and CI/CD pipelines via Jenkins for seamless deployment, enabling users to query BigQuery results based on configured KPIs with parameter inputs.
- Performed Descriptive/Predictive Time-Series Analysis on the data gathered through the different business processes using Python packages to draw inferences. Developed pipelines to perform Time-Series predictions for a variety of granularities and optimized them through batch processing to handle large amounts of data.
- Created API endpoints through Flask to perform CRUD operations on a variety of new data based on user requests as an additional feature to be processed in an existing vehicle damage score prediction model.
- Built a scheduling system using RabbitMQ, Celery, and Cron beats that can perform computation every night for the data gathered by the end of a business day eliminating manual processing of data. Facilitated other teams to use these results directly for their projects through Flask API endpoints helping in a 20% reduction in their lead time.

Renault Nissan Technology Business Centre India (RNTBCI) Chennai, India
Software Developer *July 2017 - April 2021*

- Implemented API end-points using Java Spring framework to allow engineering team users to directly retrieve vehicle performance data (read-only) increasing the availability of essential data to required teams.
- Created scripts in Databricks using Scala to completely automate ETL operations on semi-structured incoming vehicle data through Azure DataLake for Analyzing and Reporting tasks.
- Developed scripts in Python to automate the post-processing/reporting tasks in several engineering teams, enabling 40% reduction in the lead time of projects.

Technical Skills

Languages	:	Java, Python, PySpark, HTML, CSS, Javascript, C++, MATLAB, R
DB/Cloud	:	SQL, MongoDB, Cassandra, AWS (Lambda, EC2, S3), GCP Bigquery, Azure (Databricks, DataLake)
Frameworks	:	Spring/Spring boot, Flask, React, Bootstrap
Tools	:	Maven, Docker, Jenkins, Postman, Git, Linux

Projects

Twitter Streaming Sentiment Analysis, UT-Dallas | *PySpark, Kafka, Kibana, Docker* *July 2022*

- Built a structured streaming app for sentiment analysis with text classification on filtered tweets (e.g., COVID-19) using the Twitter API via Kafka. Utilized Logstash, Elasticsearch, and Kibana for storage, visualization, and polarity analysis of tweets.

Plot Summary Based Search Engine for Movies, UT-Dallas | *Scala, SparkSQL, Databricks* *June 2022*

- Constructed a search engine in Databricks using Carnegie Mellon University's Movie Summary Corpus (42,000+ movies) to recommend the top 10 closely related movies based on user input, utilizing MapReduce for TF-IDF and cosine similarity calculations for single-term and multi-term queries, respectively.

DoorDash Database System Design, UT-Dallas | *SQL* *March 2022 - May 2022*

- Designed and implemented an Oracle SQL-based DoorDash system, including Entity-Relationship diagram design, relational modeling, and the creation of tables, triggers, and PL/SQL procedures. Triggers and procedures included age verification for dashers, monthly pay stub computation, and customer billing.