

# Mohan S. Deshpande

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## Experience

### Capital One, Plano Texas | Software Engineer

July 2021 - Present

- Worked on the overhaul of invoicing system by introducing tiers in the fees based on business logic, machine learning models and vendor availability which resulted in **\$2 million per year** savings for the company.
- Reduced data load over the network by **50%** in **Spring batches** by optimizing SQL, removing duplicates, and implementing complicated aggregation logic.
- Developed **Streams** and **APIs** in **Java Spring boot** and **Apache Kafka** to implement business logic, update and query database using DAO's, supply formatted data to components downstream.
- Deployed applications utilizing AWS services like **Amazon EC2, Load balancer, RDS and S3**.
- Automated data migration from spreadsheets to Postgres using **Python** scripts to save hours of manual work.
- Created **Splunk dashboards**, Alerts, Visualizations, and Configurations by executing complex Splunk queries to help debug and monitor components.
- Worked with continuous integration tool **Jenkins** as **CI/CD pipeline**, GitHub source code management tool and **AWS**.

### CSE Dept. At UTA, Arlington Texas | Software Engineer

July 2020 – June 2021

- Lead a 3-person team to develop core functionalities for an online learning platform, using Laravel 7, PHP, and MySQL.
- Improved the responsiveness and rendering time of the site by 20% using Yajrabox DataTables and HTML Builder.
- Designed database schema and developed core CRUD operations for multiple modules.

### Webwide IT Solutions, Pune India | Web Developer Intern

May 2016 – Nov 2016

- Lead a 3-person team to develop core functionalities for an online learning platform, using Laravel 7, PHP, and MySQL.
- Developed a POC to migrate operational Fleet management codebase into ReactJS.
- Achieved up to 20% faster render times using stateful components.
- Undertook initial project structure setup such as configuring redux, incorporating Google Maps API to represent GPS tracking info.
- Implemented chart-based dashboard using Highcharts library to gain more logical insights.

## Education

M.S. in Computer Science, The University of Texas at Arlington (August 2018- May 2020)

GPA: 3.8/4.00

Bachelor of Engineering in Information Technology, Pune University (June 2013-May 2017)

GPA: 3.4/4.00

## Technical skills

**Languages:** Java, Python, JavaScript, PHP

**Cloud Computing:** AWS EC2, S3, DynamoDB, GCP

**Frameworks:** Java Spring boot, Spring Batch, Rest API

**Database:** PostgreSQL, NoSQL, MongoDB

**Big data frameworks:** Apache Kafka, MapReduce, Spark, Splunk

**Misc.:** Agile, Scrum Software Development, Linux/Unix

## Projects

### Big Data Analysis | Java

Nov 2018

- Analyzed over 4 million movie titles within IMDB dataset using Hadoop map-reduce framework and developed programs to provide interesting insights, using Java.
- Improved computation time by 15% using in-mapper combiners, as well as multiple mappers to optimize program.
- Implemented the project on a cluster of 2000 nodes and analyzed run times by leveraging the knowledge of multi-threaded implementation, optimizing shuffle operation, and partitioning function, as well as fault tolerance of framework.

### ETL Data Pipeline | Python, GCP

Jan 2020

- Built an automated, scalable ETL data pipeline using Google Cloud Dataflow, Apache Beam, Pub/Sub, BigQuery and Data Studio to analyze and visualize big dataset.
- Simulated real time streaming as well as batch processing using Google Cloud templated, Apache beam and Pub/Sub.
- Scheduled cron jobs and Google Cloud Functions to automate data extraction and running the pipeline weekly.