

CHARMI DHARMENDRAKUMAR PARMAR

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SUMMARY

Detail-oriented **Software Engineer** with expertise in web development, data engineering, ML workflows, & data analytics. Skilled in **Python, JavaScript, React, SQL, Alteryx, Power BI, Tableau & ETL** processes, with a strong focus on UI/UX, data quality, & automation.

PROFESSIONAL EXPERIENCE

Software Engineer, Humanitarian.AI, Boston, MA

January 2025 – February 2025

- Developed and deployed a fully responsive personal portfolio website using **ReactJS, HTML, CSS, and JavaScript**, implementing reusable components, smooth navigation with **React Router**, and optimized performance using lazy loading and code splitting.

Data Analyst, Abecedarian LLC, Boston, MA

July 2024 – December 2024

- Executed **data preprocessing, feature selection, and data scrubbing** on large-scale text datasets using **Python, Pandas, and NLTK**, ensuring high-quality data for ML workflows.
- Implemented advanced data preprocessing techniques using **Python (NumPy, Pandas, Scikit-learn)**, including feature selection, categorical encoding, and data imputation, to improve predictive accuracy for insurance retention ratio analysis.
- Developed machine learning models, including **Random Forest** and **Logistic Regression**, achieving improved predictive performance through rigorous model evaluation using R-Squared, Mean Squared Error, confusion matrix, precision, recall, and F1-score.
- Designed complex **SQL queries** to analyze Walmart's sales data, identifying top-performing product lines, high-revenue branches, and sales trends across different cities, time periods, and customer segments, leading to data-driven sales optimization strategies.

PROJECTS

[ConnectEngine - A Social Media Application](#) | *HTML, CSS, JavaScript, React JS, Node.js, MongoDB*

- A full-stack application with real-time posts, and secure authentication using **React JS, Node, MongoDB, and JsonWebTokens (JWT)**.
- Built 10+ REST API endpoints with **token-based authentication** and **role-based authorization**, streamlining secure access for users.

[Cloud-Native Assignment Management](#) | *AWS, GCP, Packer, Terraform, Git, CI/CD, YAML, Bash, Java, Linux, MySQL*

- Formulated and automated **AWS infrastructure** provisioning (**VPCs, EC2, RDS, DNS, CloudWatch, DynamoDB**) with **Terraform** and **GitHub Actions** for CI/CD integration, automating unit and integration testing, AMI creation, and securing access with IAM policies.
- Crafted 10+ **RESTful APIs** for assignment and account management using **Python and JWT**, scalable to handle 10,000+ requests/min.

[Exploratory Data Analysis \(EDA\) and Visualization of Collision Data](#) | *Talend, Tableau, Power BI*

- Streamlined **big data consisting 5M+ records** on NYC Vehicle Collision in Talend, enhancing data accuracy by 60% & reducing analysis time by 40%. Crafted **10+ interactive Power BI & Tableau dashboards**, enhancing insights by 40% with KPI tracking and geo-mapping.

[Exploratory Data Analysis \(EDA\) of Airbnb Listing NYC](#) | *Excel, SSMS, SQL, Python, Tableau*

- Enhanced data analysis by leveraging **SQL (joins, CTEs)** for data querying and **Python (pandas, numpy)** for data cleaning and analysis.
- Crafted 5+ interactive **Tableau dashboards** with location search filters and conducting performance analysis using Python & Tableau.

[Sentiment Analysis - Amazon product reviews](#) | *Python, Jupyter, Docker, GitHub*

- Performed **feature selection & data cleaning (stop word removal, lemmatization)** on 15K+ reviews using **Python, Pandas, and NLTK**.
- Achieved **96% accuracy** with an **F1 score of 0.87** through ML algorithms (**Naïve Bayes, SVM, Random Forest**), leveraging **NLP libraries**.

[AI-Driven Semantic News Analyzer](#) | *Python, FAISS, Langchain, OpenAI*

- Developed an analytics tool using **Python, FAISS, LangChain, & OpenAI**, leveraging **generative AI & LLMs** to enhance equity research analysis, achieving a 40% efficiency boost in semantic search & a 30% accuracy improvement in **data processing & extraction**.

[Comprehensive ETL and Data Modeling](#) | *Alteryx, Talend, ER Studio, Power BI, Tableau, SQL, MySQL, Google Big Query, Azure*

- Architected data pipelines using **Alteryx and Talend** to extract, transform and load 125 million+ raw data points into SQL Server using SSMS, boosting data quality by 70%. Elevated data-driven insights through 10+ interactive visualizations in **Tableau and Power BI**.
- Implemented **Star schema and Snowflake schema** to design **Enterprise DataWarehouse (EDW)** model, catering to OLAP needs.

KEY SKILLS AND PROFICIENCIES:

Programming and AI/ML	Python (Pandas, NumPy, Scikit-Learn), NLTK, XGBoost, Linear Regression, Logistic Regression, AutoML
Data and Analytical Tools	SQL (Joins, Subqueries, Window Functions), Tableau, AWS QuickSight, S3, Alteryx, Power BI, Kafka, EDW
Database Management	Relational Database, Redshift, MySQL, PostgreSQL, NoSQL, DynamoDB, MongoDB, Google BigQuery, SSMS
Automation/Management	Git, Jenkins, GitHub, Agile Methodologies, SDLC, Scrum, Kanban, JIRA, Confluence, MS Excel, TDD, Spark
Data Warehousing	Star & Snowflake Schemas, Partitioning, Compression, Multi-layer Architectures (Staging, Transformation)

EDUCATION

Master of Science in **Computer Software Engineering**, *Northeastern University, Boston, MA*

September 2022 - May 2024

Bachelor of Technology in **Computer Science and Engineering**, *Nirma University, Ahmedabad, India*

August 2018 - May 2022