

# Akshay Reddy

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*Experienced Data Professional with a proven track record in delivering impactful solutions across data analysis, data engineering, and machine learning. Expertise in leveraging advanced analytics, business intelligence tools, and scalable systems to drive data-driven decision-making*

## AREAS OF EXPERTISE

- Python programming
- Data Analysis (Pandas, NumPy, SQL)
- Data Visualization- Power BI, Tableau
- Excel, Matplotlib, Seaborn
- Data Wrangling, ETL Pipelines
- Predictive Modeling
- Airflow, Spark, Hadoop
- MySQL, Graph DB, Vector DB
- Big Data Processing
- Text Analytics, Sentiment Analysis
- Model Deployment & Monitoring
- Testing and debugging
- Scikit-learn, TensorFlow, Pytorch
- Problem Solving Skills
- Business Intelligence
- Feature Engineering, Fine Tuning
- APIs for Data Integration
- Cloud Technology- AWS, GCP, AZURE

## WORK EXPERIENCE

### Data Scientist – COGNIZANT TECHNOLOGY SOLUTIONS

August 2023 -December 2024

- Designed and managed machine learning classifiers for predicting disengagement risk, customer buying patterns, and personalized recommendations, overseeing data cleaning, model training, and deployment.
- Upgraded feedback classification models from SVM to transformer-based architectures, achieving an 11% improvement in accuracy and processing efficiency.
- Conducted A/B testing and statistical analysis to evaluate marketing campaigns, driving a 15% increase in conversion rates through data-driven optimization strategies.
- Developed interactive dashboards and advanced visualizations using Power BI, enabling stakeholders to make informed decisions with actionable insights.
- Led ETL pipelines to process and clean over 10 million records using SQL, improving data accessibility and readiness for analysis across multiple projects.

### Data Science Intern - COGNIZANT TECHNOLOGY SOLUTIONS

March 2021 - July 2021

- Conducted data cleaning and feature selection using Python and SQL, enhancing data quality by 25% and improving model readiness.
- Performed hypothesis testing and statistical analysis with R and Excel, contributing to a 10% increase in revenue through data-driven insights.
- Built interactive dashboards in Power BI to track and visualize KPIs, streamlining stakeholder reporting and decision-making.
- Developed responsive web pages using HTML and CSS, ensuring seamless user experience and accessibility.
- Collaborated with senior data scientists to resolve data integrity issues, ensuring accurate and reliable dashboards and reports.

## RECENT PROJECTS

### Predicting Air Quality and Pollution Levels

Machine Learning, Data Analysis, Time Series Forecasting

- Developed a predictive model utilizing historical data and meteorological factors to forecast air quality, aiming to identify trends, detect pollution peaks, and support data-driven decision-making.

### Weather Image Recognition System

Deep Learning, Computer Vision, Data Engineering

- Engineered a Convolutional Neural Network (CNN) model trained on 50,000 images to predict weather conditions with 95% accuracy. Integrated MongoDB for efficient image storage and Power BI for result visualization.

### Fuel Consumption Prediction Using Regression Analysis

Statistical Modeling, Data Analytics

- Developed regression models to predict vehicle fuel consumption (mpg) based on various features. Explored techniques including Linear Regression, Support Vector Regression (SVR), Decision Tree Regression, and Ridge Regression, implementing best practices for model optimization.

### ChatGPT from Scratch

Generative AI, Natural Language Processing, LLMs

- Designed and implemented a state-of-the-art decoder-only transformer model from scratch, incorporating key components like text embeddings, multi-head attention, and feedforward layers.

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## EDUCATION

**University of Maryland Baltimore County**

*Master of Professional Science in Data Science*

January 2023 - December 2024

**Geethanjali College Of Engineering and Technology**

*Bachelor of Engineering - BE, Electrical and Electronics Technology*

June 2017 - May 2021

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## CERTIFICATIONS

- *Tensorflow certified : Certified Tensorflow Developer*
- *Microsoft certified: Azure Data Engineer Associate*