# Akshat Parikh

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## EDUCATION

**Master of Science in Data Science** — Expected Graduation Date: May 2026
*The University of Texas at Arlington, Arlington, TX* — **GPA: 4.00/4.00**
**Bachelor of Technology in Information Technology** — *May 2024*
*Charotar University of Science and Technology, Gujarat, India* — **CGPA: 3.98/4.00**

## SKILLS

**Programming:** Python (seaborn, matplotlib, NumPy, pandas), MySQL, R, HTML/CSS, C, C++
**Visualization tools:** Tableau, Microsoft Power BI, Microsoft Excel, Google Sheets
**IDE & Tools:** Jupyter Notebook, Google Colab, R-Studio, GitHub, Microsoft Office, AWS, Streamlit, VSCode
**Core Skills:** Data Analysis and Visualization, Databases, Data modelling, Machine Learning, Statistical Modeling
**Soft Skills:** Teamwork, Communication, Problem-Solving, Time Management, Adaptability

## PROFESSIONAL EXPERIENCE

**Student Assistant – Office of Admissions**
The University of Texas at Arlington, Arlington, Texas, United States — *October 2024 - Present*

- Managed student admissions inquiries through email, phone, and in-person in a part-time role, boosting inquiry resolution efficiency by 80%.
- Handled and organized large datasets of over 50,000 university student records, streamlining data management processes and enhancing operational productivity.

**Data Science Intern**
*Agevole Innovation Pvt. Ltd, Surat, Gujarat, India* — *December 2023 - June 2024*

- Spearheaded the development of a Real Estate Web App, managing 15000+ property records in MongoDB, improving search functionality by 20% through tailored filters.
- Engineered statistical methods, achieving MAE of 17.87 for Linear Regression and 18.67 for Random Forest, and MSE of 1246.98 and 1277.54, to compare model accuracy and minimize prediction errors.
- Collaborated with a team on implementing secure user authentication using JWT, Firebase, and Google OAuth, safeguarding sensitive data and ensuring 99.9% uptime reliability.

**Machine Learning Intern**
*Cygnux Softech Pvt. Ltd, Surat, Gujarat, India* — *May 2023 - June 2023*

- Developed a Flask-based web application offering real-time car price predictions, utilizing 1850+ records to provide accurate valuations based on key features, achieving an R-squared value of 0.87 for prediction accuracy.
- Deployed a serialized Linear Regression model (Pickle) to ensure robust backend processing, achieving prediction outputs in under 500 milliseconds, enhancing user experience.

## PROJECTS

**Stock Market Forecasting Using LSTM**

- Engineered a predictive LSTM model to analyze stock prices, achieving a forecast accuracy of 87%, enabling reliable time-series predictions, and surpassing traditional methods.
- Executed advanced data exploration using Python libraries like yfinance and Seaborn, uncovered market trends, and enhanced data quality by reducing noise by 70%, driving actionable investment insights.
- Implemented robust risk assessment techniques, including moving averages and statistical value-at-risk (VaR), enhancing investment evaluation strategies and improving portfolio risk analysis by 25% experience.

**Loan Approval Prediction**

- Conducted Exploratory Data Analysis (EDA) to unveil correlations for predicting loan approval outcomes, achieving a correlation coefficient of 0.93.
- Implemented preprocessing techniques including one-hot encoding and SMOTE for dataset balancing and improving dataset quality.
- Developed and optimized an XGBoost classification model, achieving significant performance improvements with an accuracy of 91%, and outperforming other classification models.

**Number Plate Detection and Recognition using OpenCV**

- Designed an image processing pipeline with OpenCV, including grayscale conversion, noise reduction, smoothing, and Canny edge detection, improving data extraction efficiency by 1.5.
- Integrated contour detection and edge analysis techniques to improve license plate segmentation and refine character recognition, reducing data processing requirements and increasing accuracy by 20%.
- Utilized machine learning algorithms and Python Tesseract to extract and decode license plate text, integrating data from various sources and achieving an overall model accuracy of 83%.

## RESEARCH PUBLICATIONs

**Number Plate Detection and Recognition using OpenCV, IEEE Xplore, Scopus, IDCIoT 2024[Link]**