Akshat Sharma

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SKILLS

- **Languages & Databases:** Python, MySQL
- **Machine Learning:** Regression, Classification, Clustering, Deep Learning, Generative AI, Ensemble Methods, Hyperparameter Tuning, Descriptive & Inferential Statistics .
- **Frameworks & Libraries:** Pandas, Numpy, Selenium, Beautiful Soup, Scikit-learn, Pytorch, Optuna, Pydantic, Dask, Langchain.
- **MLOps & Cloud (Basics):** Docker, AWS (EC2, ECR, ASG, Load Balancer), CI/CD (GitHub Actions), DVC, MLflow, Dagshub.
- **Visualization & Web:** Plotly Express, Matplotlib, Seaborn, Streamlit, FastAPI.

PROJECTS

AutoNexus - End to End MLOps & Recommendation System (September 2025 - November 2025)

- **Scraped** & Feature Engineered a **270k+** automotive dataset using statistical analysis, visualization, Data cleaning, EDA, and feature transformations to build a clean, reliable ML-ready pipeline.
- Identified the optimal model through **MLflow experiment tracking** and **Bayesian optimization** achieving **MAE of $3000 & R2 score of 87%,** then automated the entire workflow via **DVC, CI/CD, and Restful API** endpoints for CRUD, prediction, and content-based **recommendations.**
- Engineered a scalable, **zero-downtime deployment** pipeline by containerizing the application (Docker/ECR) and implementing **auto-scaling** policies (AWS ASG + Load Balancer), ensuring high availability for live inference.

Urban Rides Demand Prediction Engine via Geo Clustering (January 2026)

- Developed a ML system to predict **taxi demand 15 minutes in advance**, processing **5GB+** of NYC trip records to help fleets minimize driver idle time and optimize positioning.
- Overcame static boundary limitations by implementing **K-Means** clustering to discover demand zones with **haversine distance** to determine the best K-Value, and using **Voronoi tessellations** to map actionable micro-regions based on real-world pickup density.
- Formulated a **custom SMAPE loss function** to mitigate high variance in spatial data, achieving a **19% SMAPE score**, and deployed the final inference engine as an interactive Streamlit application.

USA Car Trends Analysis (2024)

- Scraped and processed **200k+** US car listings using Selenium, BeautifulSoup, and Requests, cleaning and standardizing attributes like price, mileage, type, and fuel category to ensure dataset accuracy and consistency.
- Built an interactive analysis system using **Pandas, Plotly, Streamlit, and Google APIs**, producing 20+ insights (brand trends, stock distribution, fuel-type comparison, choropleth maps) enriched with high-quality **images/video ads** and deployed as a fully interactive Streamlit application.

ACHIEVEMENT & PROBLEM SOLVING

- **Top 0.25% Talent Selection:** Ranked in the top 5 out of ~2,000 candidates in a rigorous multi-round technical assessment for Bestpeers Solutions (Indore), validating superior problem-solving speed and algorithmic accuracy.
- **Critical Debugging:** Identified and diagnosed a subtle Data Leakage flaw in a standard capstone project's codebase followed by thousands of learners; validated findings through a technical review with the instructor.

EDUCATION

SRM Institute of Science & Technology — **January 2023 - December 2025**
B.C.A. in Data Science | **CGPA - 9.0** — *Chennai, Tamil Nadu*

Inventure Kids Academy — **2022 - 2023**
XII | 90.3% — *Susner, Madhya Pradesh*

CODING PLATFORMS & CHALLENGES

- **LeetCode:** SQL-50 Challenge, Pandas-30 Challenge
- **DataLemur:** SQL & Data Interview Questions
- **HackerRank:** 30 Days of Code & Gold Level Badge in SQL Challenge

MENTORSHIP PROGRAMS & COURSES

- Data Science Mentorship Program 1.0
- Data Science Mentorship Program 2.0
- Web Scraping for Machine Learning
- FastAPI for Machine Learning
- CampusX 5 SQL Case Studies
- PowerBI Course