

RUCHIKA MAHESHWARI

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SUMMARY

Analytical and results-driven Data Analyst & AI Enthusiast with nearly 3 years of experience leveraging data science, machine learning, and deep learning to drive strategic insights and intelligent solutions. Proficient in Python, SQL, Power BI, Tableau, and experienced in building end-to-end AI/ML pipelines including CNNs, Transfer Learning, Object Detection (YOLO), Generative AI (LLMs, GANs, Stable Diffusion), and model deployment. Skilled in data wrangling, statistical modeling, big data processing (Spark, Hadoop), and developing interactive dashboards for decision-making. Strong background in applied AI research, generative AI applications, and cloud-based model deployment, with a proven ability to translate complex datasets into actionable business insights.

TECHNICAL SKILLS

- **Languages & Tools:** Python, Java, Git, Excel
- **Data Manipulation & Cleaning:** Pandas, NumPy, Data Wrangling, ETL Pipelines, Structured & Semi-Structured Data (CSV, JSON, XML, Web APIs), Data Augmentation
- **Machine Learning & Statistics:** Scikit-learn, Statsmodels, Logistic Regression, Decision Trees, Gradient Boosted Trees (GBTs), Clustering, GARCH, ARIMA, Feature Engineering, Model Evaluation, Cross-Validation, Hyperparameter Tuning, Explainable AI (XAI)
- **Deep Learning & AI:** PyTorch, Torchvision, Convolutional Neural Networks (CNNs), Transfer Learning (ResNet, VGG, EfficientNet), Image Classification, Object Detection (YOLO), Face Recognition, Generative Adversarial Networks (GANs), Stable Diffusion, Transformers, Prompt Engineering, RNNs, Model Inference, Callbacks (Early Stopping, Checkpointing, Learning Rate Scheduling), End-to-End ML Pipelines
- **Computer Vision & Video Processing:** Image Preprocessing, Frame Extraction, Bounding Box Annotation, Video-based Object Detection, Custom YOLO Training
- **Big Data Technologies:** Hadoop, HDFS, MapReduce, Spark
- **Visualization:** Matplotlib, Seaborn, Plotly, Tableau, Power BI
- **APIs & Deployment:** Flask, Streamlit, FastAPI, RESTful APIs, Model Deployment Pipelines, Cloud-based AI Services
- **Databases:** MySQL, PostgreSQL, SQLite, MongoDB

EDUCATION

- Diploma in Applied Artificial Intelligence Lab | WorldQuant University, U.S. | July 2025 - Present
- Diploma in Applied Data Science Lab | WorldQuant University, U.S. | Jan 2025 - June 2025
- MCA | Vivekananda Institute of Professional Studies (GGSIPU), Delhi | Aug 2021 – Aug 2023
- BCA | Maharani College, Jaipur | 2018 – 2021

PROFESSIONAL EXPERIENCE

Data Analyst | Concentrix, India [Mar 2023 – Apr 2025]

- Analyzed large datasets using SQL, Python, and cloud platforms (AWS, Azure, GCP) to uncover business trends and forecast performance.
- Designed and delivered Power BI dashboards and automated reports for senior leadership.
- Collaborated with cross-functional teams to define KPIs and track business objectives.
- Built and deployed machine learning models (classification, clustering, regression) to support predictive analytics and improve strategic planning.

Data Science Intern | 1Stop.ai [Aug 2023 – Sep 2023]

- Conducted data cleaning and EDA on diverse datasets using Pandas and Seaborn.
- Developed visualizations to highlight key trends and insights.
- Applied descriptive statistics to improve data storytelling and stakeholder decision-making.

Software Intern | Invansys Technologies Pvt Ltd, India [Feb 2022 – Sep 2022]

- Participated in full-stack development tasks with a focus on frontend enhancements.
- Conducted unit testing and assisted with bug tracking and resolution.
- Developed interactive features using clean, maintainable code.

PROJECTS

Synthetic Medical Data Generation (Spain) | Oct 2025 - Present

- Built a Streamlit web application to generate synthetic medical datasets using Medigan, ensuring patient privacy and data integrity for Spanish healthcare records.

VisionAI: Celebrity Recognition in Indian Media | Sep 2025 – Oct 2025

- Implemented a facial recognition pipeline using MTCNN for face detection and Inception-ResNet-V1 for classification, achieving 92% accuracy with transfer learning and data augmentation.

Conversational AI Chatbot using Falcon LLM | Aug 2025 – Sep 2025

- Developed a Falcon LLM-powered chatbot with context retention, improving response relevance by 30% and scaling to 10K+ daily queries.

Real-Time Object Detection with YOLO for Video Analytics | Jul 2025 – Aug 2025

- Implemented YOLO object detection on video datasets, delivering 95% mAP and real-time performance at 30 FPS for surveillance.

Customer Segmentation in US | May 2025 – Jun 2025

- Applied clustering and predictive modeling in Python to segment consumers, uncovering 3 key groups and improving targeting by 25%.

Predictive Analytics for Housing Prices | Jan 2025 – Mar 2025

- Built a Scikit-learn regression model ($R^2 = 0.87$) with feature engineering and delivered an interactive Power BI dashboard for real-time insights.

Credit Card Fraud Detection | Sept 2024 – Nov 2024

- Engineered a fraud detection pipeline for 100K+ transactions, achieving 96% accuracy with real-time alerts that cut false negatives by 20%.

Sales Dashboard using Power BI | Jun 2024 – Jul 2024

- Developed an interactive Power BI dashboard integrating Excel & SQL data, automating reports to track KPIs and boost sales insights by 30%.

Customer Segmentation Dashboard using Tableau | Apr 2024 – May 2024

- Created a Tableau dashboard using K-Means clustering, segmenting customers into groups that improved retention by 20% and marketing ROI.

Hate Speech Detection | Jan 2024 – Mar 2024

- Built a supervised ML model with NLP & embeddings, achieving 90% accuracy in filtering hate speech for safer online communication.

Spam SMS Classification | Sept 2023 – Nov 2023

- Developed an NLP-based spam filter using TF-IDF + ML models, reaching 94% accuracy for mobile message classification.

Vahan Checker | May 2023 – Jun 2023

- Designed a Python + OCR web app to extract vehicle details from license plates with 92% recognition accuracy, automating verification tasks.

CERTIFICATIONS

- Data Analyst – OneRoad Map – (July 2025)
- Data Processing & Visualization – NASSCOM (Aug 2024)
- Power BI – Simplilearn (Jul 2024)
- Business Intelligence with Power BI workshop – Skill Nation (Apr 2024)
- Data Science Internship – 1Stop.ai (Jun 2023)
- Introduction to Database Systems – NPTEL (Jun 2023)
- Cloud Computing – NPTEL (Jun 2023)