

OM ARYAN

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EDUCATION

- **Bachelor of Science (Honors) in Computer Science** 2021-2024
Deen Dayal Upadhyaya College, University of Delhi
CGPA: 7.95
 - **Bachelor in Data Science and Applications** 2021-Present
Indian Institute of Technology, Madras
CGPA: 8.59
- Relevant Coursework: Machine Learning, Statistics, Artificial Intelligence, Data Mining, Deep Learning, Computer Vision, NLP, Data Structures & Algorithms, Database Management System, Software Engineering

TECHNICAL SKILLS

Generative AI: Large Language Models, Retrieval-Augmented Generation (RAG), Knowledge Graphs, Chatbots, AI Agents, Vision Language Models (VLMs), Prompt Engineering, Reinforcement learning, LangChain, Ollama
Programming Languages: Python, SQL, R, Java
Data Analysis & Visualization: NumPy, Pandas, Sklearn, TensorFlow, Seaborn, Matplotlib, PowerBI, Tableau, Excel
Cloud & DevOps Technologies: AWS (EC2, S3), Docker, Kubernetes, Git, FastAPI, Flask, Streamlit

WORK EXPERIENCE

- **AI/ML Engineer – Humanitics Dimensions** (Noida, Uttar Pradesh) (August 2024 – Present)
 - **Development of AI Solutions for the High Court of Madhya Pradesh**
 - Incorporated case file translation, OCR capabilities (including work with VLMs), trained and fine-tuned llama-3.1 LLM for tailored use cases, increasing querying accuracy by **80%**.
 - Created a Neo4j knowledge graph for case files, integrating advanced prompt engineering and querying
 - **Talk 2 SQL: An Intelligent SQL Query Assistant** for Seamless Database Interaction
 - Designed and implemented an advanced SQL Query Assistant that generates, explains, fixes, and executes SQL queries from natural language inputs, achieving **95% querying accuracy** and is widely adopted by in-house developers.
 - Enhanced the tool with **CSV querying** and feedback functionality, improving usability and accuracy.
 - **SRS AI Generation:** Developed an advanced AI-powered tool to generate structured SRS documents with Agentic approach and GenAI
 - Enhanced task automation using CrewAI's agentic approach for accurate, context-aware SRS generation
 - Integrated GenAI to create detailed, customizable SRS templates from minimal input for efficient drafting.

PROJECTS & RESEARCH PUBLICATIONS

- **Sustainable Development of Rural Economy through AI-powered IoT Platforms and Secured Blockchain Technology: A Review**
Duly reviewed and accepted by *Korea Review of International Studies (ISSN: 1226-4741)*
 - Enables efficient resource management, real-time monitoring, and data-driven decision-making to foster innovation.
 - Ensures secure decentralized systems to support economic resilience and the creation of *smart villages*.
- **Bone Fracture Detection from X-Ray Images**
Employed classification techniques over images to identify if the bone is fractured.
 - Implemented various classification models including KNN, Naive Bayes, Transfer Learning (ResNet50), and a custom Deep CNN, achieving **100% accuracy** with ResNet50 and **99%** with DCNN while also utilizing both architectures as feature extractors.
 - Relevant Skills: PyTorch, TensorFlow, NumPy, Pandas
- **Decoding IMDB Scores - An in-depth exploration of performance of movies released on Netflix**
Conducted exploratory data analysis (EDA) to uncover intricate patterns, facilitating informed decision-making.
 - Performed comprehensive data analysis including **Univariate, Segmented Univariate, and Bivariate analysis** to deliver actionable insights through clear visualizations and reports.
 - Relevant Skills: NumPy, Pandas, Seaborn and Matplotlib
- **Movie Sentiment Analysis and Recommendation System**
 - Leveraged Machine Learning and Natural Language Processing techniques to build a comprehensive system for sentiment analysis and movie recommendations, achieving over **90%** accuracy in predictions.
- **CrimeCast: Forecasting Crime Categories**
 - Developed an automated ML pipeline using models like XGBoost, Random Forest, and Logistic Regression to predict crime categories, achieving **95.3%** accuracy through comprehensive data preprocessing and exploratory analysis.

ACTIVITIES AND ACHIEVEMENTS

- **Chief Event Organizer, Tech Marathon (DDUC):** Led event planning and logistics for 2500+ participants, achieving a **45%** increase in participation over previous years.
- Organized and presented a **5-day Machine Learning Workshop** for the ACM DDUC Student Chapter, reaching **over 50** attendees.
- Created compelling content, written posts, for **Youth Awareness Club, Meerut** to promote NGO's mission and initiatives. Resulted in raising **Rs.25000+** and in-kind support.

HOBBIES AND INTERESTS

Interests: Photography, Travelling
Hobbies: Creative Art, Volunteer Work
Languages: Fluent in English, Hindi; Elementary Proficiency in German

AWARDS AND CERTIFICATIONS

Google AI Essentials (Google, Coursera), Excel Basics for Data Analysis (IBM, Coursera)