Ashish Kumar

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Portfolio: ashishkumar-data.vercel.app

Education

Bachelor of Technology (B.Tech) – Artificial Intelligence and Data Science — New Delhi, India
University School of Automation and Robotics (GGSIPU) — 2021 – 2025
CGPA: 8.7

Intermediate — Delhi, India
Columbia Foundation Sr. Sec. School — 2020
Percentage: 81%

Experience

Data Science Intern – NLP Applications — Feb 2025 – Mar 2025
AICTE — *Remote*

- Designed an NLP-based resume screening and ranking system, reducing shortlisting time by 70%.
- Implemented a TF-IDF resume ranking system, processing 750+ resumes and saving 5 hours/week.
- Built and deployed a Flask-based web app automating resume–JD matching for 100+ job descriptions.
- Performed text preprocessing and feature engineering on 100+ resume documents using NLTK and Scikit-learn.

AI Research Intern – Vision Systems — Aug 2024 – Sep 2024
University School of Automation and Robotics — *Delhi, India*

- Designed a deep learning-based skin lesion classification system using CNN architectures.
- Trained the model on 10,015 dermoscopic images from the HAM10000 dataset with an 80:20 train–validation split.
- Optimized training over 80 epochs, achieving 90% validation accuracy.
- Evaluated model performance using accuracy metrics and confusion matrices for multi-class classification.

Projects

Real-Time License Plate Detection System GitHub Repository
End-to-end real-time computer vision system for automatic vehicle license plate recognition

- Developed an end-to-end license plate detection pipeline using YOLOv8 for real-time object detection.
- Achieved approximately 0.92 mAP@0.5 on validation data through model training and hyperparameter tuning.
- Integrated Tesseract OCR to extract license plate text with 90% accuracy.
- **Technologies Used:** Python, YOLOv8, OpenCV, Tesseract OCR, Streamlit.

Occlusion Invariant Face Recognition System GitHub Repository
Deep learning-based face recognition system robust to facial occlusions

- Trained a face recognition model on 30,000 CelebA-HQ images resized to 256×256 RGB resolution.
- Implemented EfficientNet-B1 architecture, achieving 96.29% training accuracy and 99% validation accuracy.
- Generated 4 types of synthetic facial occlusions, improving model robustness under masked conditions.
- **Technologies Used:** Python, TensorFlow, EfficientNet-B1, Computer Vision.

Technical Skills

Programming: Python, Java, JavaScript, SQL
Machine Learning & AI: Regression, Classification, CNNs, NLP, Feature Engineering, Model Evaluation
Frameworks & Libraries: TensorFlow, Scikit-learn, YOLO
Data Analysis & Visualization: Pandas, NumPy, Exploratory Data Analysis, Matplotlib
Web, Deployment & APIs: Flask, Streamlit, HTML5, CSS3, Bootstrap
Databases & Tools: MySQL, MongoDB (CRUD Operations, Schema Design), Git, GitHub, VS Code, Render
Areas of Interest: Data Science, Machine Learning, Deep Learning, Computer Vision, LLMs, Agentic AI

Achievements

WorldQuant BRAIN Gold Level Award — May 2024

- Awarded Gold Level for strong performance in quantitative finance challenges and analytical problem-solving.