Kshitij Chaturvedi

Data Scientist | ML Engineer

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EDUCATION

Guru Gobind Singh Indraprastha University (ADGIPS), Delhi

B. Tech. (Electronics and Communication Engineering): *Overall GPA - 8.9 (7th Sem.)* — *2021 - Present*

Hansraj Model School, New Delhi

12th (Physics, Chemistry, and Mathematics): *Percentage - 84%* — *2020 - 2021*

10th: *Percentage - 88%* — *2018 - 2019*

WORK EXPERIENCE

Creative Ai Solutions [NYNEXA] — *(April 2024 - May 2024)*

Backend Developer (Intern)

- Developed initial backend architecture for an AI/Web3 Marketplace, boosting system efficiency by 20% using AI dev tools.
- Established a scalable backend foundation with NextJS, Tailwind CSS, MonoRepo - TurboRepo, MongoDB, & Prisma.

SyntHeim [Radian Arc] — *(Jan 2024 - Aug 2024)*

SDE Intern

- Contributed to developing an AI-driven health application using Machine Learning & NLP.
- Utilizing libraries like Numpy, Pandas, Scipy, Scikit-Learn, TensorFlow, SpaCy, NLTK, Open-Ai, & Flask.
- Led a team of 8 developers to implement a virtual AI assistant for real-time personalized and multilingual responses.

PROJECTS

Cloudy (A heavy rainfall & cloudburst prediction system)

- Designed and implemented a prediction pipeline using LSTM, GRU, and CNN models with advanced data reprocessing (DateTime transformations, Cyclic & Seasonal features, Rolling mean & Sliding window) on historical and real-time data.
- Integrated hardware (ESP32 with DHT11 & beta rain sensor) to collect real-time weather data.
- Leveraged tools: TensorFlow, Keras, Scikit-learn, Pandas, Matplotlib, and DVC for model and prediction pipeline management & Flask and Docker for model deployment.

Coccidiosis Detection in Chickens

- Implemented transfer learning approach, using a CNN-based system for disease classification using fecal images, leveraging the VGG16 pre-trained model for improved accuracy.
- Designed an automated pipeline workflow with logging, YAML configurations, DVC, Docker, and CI/CD via GitHub Actions.
- Tools used: Numpy, Pandas, Scipy, Matplotlib, Seaborn, TensorFlow, Keras, and Flask to build a scalable and efficient classification framework.

Facial Emotion Detection

- Developed a real-time emotion detection application using CNN with a custom architecture for feature extraction and classification, utilizing FER2013 dataset preprocessing with ImageDataGenerator.
- Implemented the face detection system with OpenCV's Haar Cascade for real-time emotion prediction and visualization.
- Tools & frameworks used: Numpy, Pandas, Scipy, Matplotlib, TensorFlow, Keras, OpenCV, and Flask to build a scalable and efficient classification framework.

SKILLS

- **Programming Languages:** Python, JavaScript.
- Object Oriented Programming, DBMS, Data Structures & Algorithms, Computer Networks.
- **Ai:** Data Analytics, Visualizations and Preprocessing, Machine Learning and Deep Learning, Computer Vision.
- **Frameworks & Libraries:** NumPy, Pandas, Matplotlib, Seaborn, Scipy, Scikit-Learn, Tensorflow, Keras, PyTorch, OpenCV, Flask, FastAPI, ReactJS, Tailwind CSS.
- **Tools & Technologies:** MySQL, MongoDB, Version Control (Git, GitHub), MLOps (DVC, Docker), Microsoft Excel.
- **Soft Skills:** Effective Communication, Time Management & Attention to Detail.

ACADEMIC ACHIEVEMENTS

- IBM Certified: Artificial Intelligence Analyst.
- Deeplearning.ai Certification by Andrew NG: Machine Learning Specialization in Supervised ML, Advanced Learning Algorithms, and Unsupervised ML.
- Top 10 Teams in HackMait-22 by MAIT and EmpowHer Hack by IEEE-IIITD. Additionally, Top 25 Vihan-2.0 by IEEE-DTU-23.
- Held leadership roles as Management Head in ECELL-ADGITM and Instrumental Head in Swaranjali-ADGITM.