Anuj Bhandari

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ABOUT ME

I am a dedicated and passionate Computer Science student at IIMS College with a strong focus on machine learning, computer vision, and data-driven problem-solving. I have experience developing high-accuracy models for image segmentation, classification, and predictive analytics using TensorFlow and PyTorch. I thrive on solving complex problems through data science, artificial intelligence, and scalable computing technologies.

SKILLS

- Programming Languages: Python, R, Java, JavaScript, TypeScript
- Frameworks & Libraries: TensorFlow, Keras, PyTorch, Express, Scikit-Learn, Flask, PySpark
- Technologies & Tools: Git, SQL, Linux

EDUCATION

Bachelor of Computer Science (Hons) – IIMS College   Expected 2026

PROJECTS

Sentence Completion with LSTM & Word2Vec

Personal NLP Project

Tools & Technologies: Python, TensorFlow, Keras, NLTK, spaCy, BeautifulSoup, GloVe

- Built a text generation model using **LSTM neural networks** with **pre-trained GloVe word embeddings**, trained on Radiohead-related content scraped from Wikipedia.
- Implemented a complete **NLP pipeline** including web scraping, text preprocessing (tokenization, lemmatization), and model training for sentence prediction.
- Created a **sentence completion tool** that predicts the next words given an input prompt, using sequential modeling and contextual embeddings.
- Utilized **BeautifulSoup** for data extraction, **spaCy/NLTK** for NLP preprocessing, and **TensorFlow/Keras** for model architecture and training.
- Saved trained model files and tokenizers for reusable deployment and evaluation.
- Gained hands-on experience with **sequence modeling**, **embedding layers**, and **deep learning for NLP**.

MRI Brain Tumor Segmentation

Deep Learning Project

Tools & Technologies: Python, TensorFlow/Keras, U-Net, OpenCV, NumPy, Matplotlib

- Developed a **U-Net-based deep learning model** to segment brain tumors from MRI scans with high precision.
- Aimed to enhance diagnostic accuracy and assist doctors in treatment planning by identifying tumor regions effectively.
- Applied techniques such as data augmentation, loss function optimization, and post-processing to improve segmentation quality.

Maternal Health Risk Analysis with PySpark

Data Science Project

Tools & Technologies: PySpark, Python, Logistic Regression, Random Forest, XGBoost, ANN, Seaborn, Matplotlib

- Built predictive models (**Logistic Regression, Random Forest, XGBoost, ANN**) to assess maternal health risk levels.
- **Processed and analyzed** large-scale datasets (Maternalrisk.csv) using **PySpark**, improving data processing speed by **10x** compared to traditional Pandas operations.
- **Implemented exploratory data analysis (EDA)** using Seaborn and Matplotlib, generating **6+ key visualizations** to identify risk levels and patterns.
- **Optimized Spark DataFrame operations**, reducing query execution time by **40%**, leading to faster insights.

AWARDS

Winner – IIMS Hackathon Deep Learning Codefest *(Best Model – Image Segmentation for Autonomous Vehicles)*

- Developed a **deep learning model** for **semantic segmentation** of urban street scenes using a labeled dataset with 13 object classes (e.g., roads, vehicles, pedestrians).
- Utilized Python, OpenCV, NumPy, Pandas, and Matplotlib for image preprocessing and visualization.
- Processed grayscale segmentation masks to generate binary class-specific masks, improving clarity for training.
- Implemented data organization techniques, sorting images and masks into structured datasets for machine learning workflows.
- Optimized dataset handling using Pandas DataFrames, reducing preprocessing time by **30%**.

1st Runner-Up – Turboline x IIMS Hackathon 2025

- Developed a real-time posture analysis tool for powerlifting exercises using Python, OpenCV, and MediaPipe. Implemented pose estimation and classification for squat, bench press, and deadlift, delivering instant feedback via a Streamlit dashboard.
- Competed against university teams from Nepal, India, Malaysia, and across Asia, solving real-world challenges at the intersection of artificial intelligence, sports, and media.
- Developed innovative solutions with a focus on sports technology, media intelligence, and data-driven problem solving.
- Gained recognition by an international judging panel of industry leaders from organizations such as the NFL, NBA, and Fanatics.
- Demonstrated strong teamwork, technical expertise, and creativity under tight deadlines in a competitive environment.