Name: Vibhuti Dabas

Eductaion: based in Manchester, UK. She holds an MSc in Advanced Computer Science with a specialization in Artificial Intelligence from the University of Manchester, expected to be completed in September 2025. Prior to that, she completed her Bachelor of Technology in Information Technology from Indira Gandhi Delhi Technical University for Women, graduating with an 8.6 CGPA in May 2024.

Research publication paper: Her research contributions include the construction of hyperspectral images from RGB images using CNN, published in the Multimedia Tools and Applications journal. This study explored an affordable approach to converting RGB images into Hyperspectral Images (HSI), making medical and environmental monitoring more accessible. She also contributed to the Artificial Intelligence Application (AIA) journal with a study on developing a university auto-reply FAQ chatbot using NLP and neural networks.

Professional Experience: She has worked as a **Jr. AI Engineer** at Xplorazzi Adventures Pvt. Ltd. in Bengaluru, India, from March to October 2024. In this role, she played a crucial role in developing and deploying machine learning models for self-checkout kiosks, incorporating YOLO-based object detection and MMDetection to ensure real-time product recognition. She actively interacted with clients, handling data generation and preprocessing for model training and testing, while also optimizing inference on edge devices for an improved checkout experience.

Previously, she worked as a **Data Science Intern** at CRUV Dimensions Pvt. Ltd. in Bengaluru from September to December 2023. There, she collaborated with food apps to capture shopping cart screenshots, extracting key information such as item names, customizations, and pricing to propose cost-effective optimizations. Additionally, she built one-shot learning models using Hugging Face to match user-uploaded images and videos with product names.

During her time as a **Machine Learning Intern** at Merilrish in Tamil Nadu, India, from April to July 2023, she worked on social media profile analysis using API data, applying sentiment analysis techniques to determine whether the extracted text carried a positive, negative, or neutral tone. Additionally, she interned at **VLink Inc. in Gurugram, India**, in June-July 2022, where she developed live motion analysis models to track movement postures during rehabilitation therapy sessions for individuals recovering from injuries.

Projects: she has implemented a **QandA system by text extraction from a given PDF**, designing a data extraction pipeline using Ollama to structure hardware specifications from GivEnergy data sheets with optimized inference on single-node clusters. She also developed a **voice cloning system** using SV2TTS, which generates a digital voice representation based on short audio samples, used for generating natural-sounding speech from written text. Additionally, she created a **Freshers' Query Chatbot** capable of answering a wide range of university-related queries, using a combination of NLP and deep learning techniques with a Bi-LSTM model.

Technical expertise: spans across **Machine Learning & AI**, including regression, classification, deep learning frameworks such as TensorFlow, PyTorch, and Keras, and large language models like Hugging Face, Transformers, BERT, and GPT. She also has experience with multi-agent systems. In the domain of **Data & MLOps**, she is skilled in RAG, NLP tools such as SpaCy and NLTK, data handling with ELK Stack, Neo4j, and Power BI, and deployment using AWS SageMaker, MLflow, and Docker. Furthermore, her **Software & Cloud Engineering** skills include proficiency in Python, R, C++, GoLang, SQL, JavaScript, and DevOps tools like Terraform and Kubernetes, along with cloud platforms such as AWS, GCP, and Azure. She is experienced in frameworks like FastAPI and Django.