Mridul Sharma

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Technical Skills

Programming Languages: Python, Java, JavaScript, SQL, HTML, CSS

Machine Learning Frameworks: TensorFlow, PyTorch, Keras, scikit-learn

Education

Amrita Vishwa Vidyapeetham   **Sep. 2021 – June 2025**
Bachelor of Technology in Computer Science, Current GPA - 9.15   *Kollam, Kerala*

Delhi Public School   **2021**
CBSE, 12th PCM - 93%   *Durg, Chhattisgarh*

Jaycees Public School   **2019**
CBSE, 10th - 95.6%   *Rudrapur, Uttrakhand*

Experience

Deep Learning Research Intern, AIMS   **December 2023 – Present**
Kochi, Kerala

- Engineering a CNN-based tool for automated counting of breast cancer cells, increasing counting efficiency by 60%.
- Enhancing deep learning algorithms using TensorFlow and PyTorch, to reduce model's training time by 30%.
- Established automated testing protocols, improving model robustness and reducing manual testing effort by 50%.
- Created scripts for data aggregation and image pre-processing steps like image labelling, cutting pre-processing time by 30%.

Research Intern, ACM   **October 2023 – December 2023**
Kollam, Kerala

- Used Pre-trained classification models using deep learning techniques, achieving 100% accuracy using the MobileNet model.
- Implemented machine learning models using TensorFlow and scikit-learn, resulting in a 20% performance improvement.
- Presented research findings at the COCONet conference 2023, leading to a publication in the Springer journal, significantly advancing the field of medical image analysis.
- Conducted initial image preprocessing using tools like ImageJ, improving dataset quality by 25%.

iOS App Developer Intern, Indian Institute of Technology, Bhilai   **August 2023 – September 2023**
Raipur, Chhattisgarh

- Created an iOS app for a payment system using Swift framework, enhancing the transaction security and user experience.
- Integrated secure payments using NFC ID cards, reducing transaction time by 40%.
- Enhanced app's visual appeal and user experience, increasing user satisfaction by 40%.

Projects

ConversLLaMA | *Python, RAG*   **May 2024**

- Designed an advanced conversational AI chatbot using LLaMA-3 and Retrieval-Augmented Generation (RAG), increasing contextual response accuracy by 35%.
- Implemented a backend API with FastAPI to handle user queries, reducing response time by 25%.
- Refined performance and response times through model fine-tuning, resulting in a 20% increase in user engagement.

AI Voice Assistant App | *Flutter, OpenAI, DALL-E API*   **January 2024**

- Built a mobile app with Flutter for an AI-powered voice assistant, achieving a 25% increase in user interaction.
- Integrated OpenAI and DALL-E APIs to generate responses and images from voice prompts, reducing response time by 30%.
- Optimized the user interface using Flutter widgets, enhancing user satisfaction ratings by 20%.