Yamini Masand

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Education

VIT Bhopal University — Bhopal, India
Bachelor of Technology, Computer Science (AI/ML) - CGPA: 9.0 — *Sep 2022 – Present*

Fr. Agnel School — Noida, India
Grade XII - Physics, Chemistry, Maths, Computer Science — *Apr 2018 – Jun 2022*

Experience

Indian Institute of Technology, Delhi — Dec 2024 – Present
Research Intern — *Delhi, India*

- Researched and implemented 3D model data mining techniques by replicating and analyzing academic codebases, with a focus on feature detection in CAD models using **OpenCascade**.
- Extracted and processed features from STEP files for creating 3D models and conducting engineering analysis.
- Delivered structured presentations translating complex research findings into actionable insights, enhancing clarity and technical communication within the research group.

Coforge Ltd. — Sep 2024 – Dec 2024
Machine Learning Intern — *Noida, India*

- Developed an AI-powered university chatbot using **Retrieval-Augmented Generation (RAG)**, enhancing the quality of responses to student queries with 90% accuracy and reducing manual intervention
- Automated collection and preprocessing of university-specific documents using Python-based web scraping, and fine-tuned transformer models via **Hugging Face** to adapt to domain-specific language and improve chatbot accuracy.

Technical Skills

Languages: Python, C/C++, Java, SQL, HTML, CSS
Developer Tools: Git, Google Cloud Platform, AWS, VS Code, PyCharm, IntelliJ, Tableau, Excel, MATLAB.
Libraries: pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow, Hugging Face PyTorch, Keras, OpenCV, OpenCascade, BeautifulSoup.

Projects

OncoTrace.ai | *Machine Learning, Python (Flask + Streamlit)* — Oct 2024 – Dec 2024

- Built an AI-powered web application to identify cancer-associated biomarkers using gene expression data.
- Engineered a user-friendly web interface using Next.js, Flask, and Streamlit; enabled seamless interaction with cancer biomarker prediction model for over 50 researchers, facilitating quicker data analysis.
- Deployed a trained ML model to analyze genomic inputs and generate accurate biomarker predictions in real time.

Plant Disease Detection | *Python, Deep Learning, Streamlit* — Mar 2024 – May 2024

- Developed a real-time plant disease detection model with an accuracy of 85% using a CNN-based architecture.
- Integrated the model into a Streamlit app, allowing users to upload images of plants for disease detection.
- Implemented a chatbot in the app, providing disease diagnosis information and recommended treatment, which increased user engagement by 30%.

Drowsiness Detection System | *Machine Learning, Computer Vision, OpenCV* — Aug 2023 – Sep 2023

- Developed a real-time drowsiness detection system using facial landmark analysis to monitor driver alertness.
- Achieved an accuracy of 93% for detecting yawning and closed eyes using YOLOv5, validated on a diverse dataset.
- Calibrated YOLOv5 model hyperparameter settings to enhance the detection of facial landmarks in dimly lit environments, resulting in a 10% improvement in yawn and eye closure detection accuracy.

Honors and Achievements

- Established a robust Research and Development framework while serving as **lead** for the Android Club at VIT Bhopal.
- Facilitated interactive workshops and speaker sessions for a group of 100+ students, immersing participants in machine learning fundamentals by applying learned theories to tangible projects with proven results.