Arpit Sengar

arpitsengar99@gmail.com | 9311389851 | arpy8.com | linkedin.com/in/arpitsengar | github.com/arpy8

Skills

Programming Languages: Python, C++, JavaScript, TypeScript

Technical Expertise: Machine Learning, Cloud Computing, Information Retrieval, Data Storage, Computer Vision, Natural Language Processing, API Development

Tools & Technologies: Unix/Linux, Docker, AWS, Git, GitHub, Selenium, Postman, TensorFlow, React, MongoDB

Education

VIT Bhopal University, B.Tech. in Computer Science — Sept 2022 – Aug 2026

- GPA: 7.6/10.0
- **Relevant Coursework:** Machine Learning, Data Structures, Algorithms, Networking
- **Leadership:** Elected President, Omdena VITB Chapter - Lead and Collaborated in 10+ OSS projects
- **Achievements:** Selected finalist for Smart India Hackathon (SIH) 2024 among 2,000+ participating teams

Experience

SDE Intern, Simplify3x – Bangalore, India — Oct 2024 – Dec 2024

- Engineered a context-aware RAG-based system that enhanced chatbot response accuracy by 45% through integrated retrieval and generation techniques
- Optimized conversational AI performance by implementing advanced NLP algorithms and real-time data streaming protocols

AI ML Intern, Paritranaya Global Pvt. Ltd. – Bhopal, Madhya Pradesh — Jun 2024 – Aug 2024

- Pioneered a CDSS-based ML model for skin lesion detection integrating Grounding DINO with Meta SAM, achieving 87% diagnostic accuracy
- Executed end-to-end deployment as a production-ready API on Hugging Face, processing 1,000+ daily image analyses

Junior ML Engineer, Omdena – Remote — Apr 2024 – Jun 2024

- Orchestrated deployment of cross-functional team-developed models and APIs, ensuring 99% reliability in solution integration
- Formulated and fine-tuned a sentiment analysis model using Google BERT, elevating classification accuracy from 72% to 89%

SDE Intern, Rex Industries – Bhopal, Madhya Pradesh — Nov 2023 – Apr 2024

- Constructed advanced computer vision algorithms using OpenCV, delivering 92% accuracy in body pose estimation
- Devised efficient solutions for real-time human pose tracking that reduced latency by 40% over previous implementations

Projects

MaximusML: Enterprise ML Platform — arpy8/MaximusML

- Engineered a streamlined application for dataset management, model training, and AWS S3-based model storage, reducing deployment time by 60%
- Implemented diverse machine learning algorithms creating a versatile platform capable of addressing multiple business use cases
- Designed an intuitive user interface that decreased the learning curve for non-technical users by 75%, as measured through usability testing
- **Technologies:** Python, AWS S3, Streamlit, Scikit-learn, Docker, REST APIs, PyCaret

BaatCheet: Secure P2P Communication Platform — arpy8/BaatCheet

- Architected a secure peer-to-peer video communication platform utilizing WebRTC technology
- Established end-to-end encryption and secure session management protocols compliant with healthcare communication standards
- **Technologies:** JavaScript, WebRTC, Node.js, Socket.io, HTML5/CSS3

Skin Lesion Classification System — arpy8/Skin

- Spearheaded development of an AI-powered classification system for skin lesions achieving 91% diagnostic accuracy
- Created a Clinical Decision Support System (CDSS) that reduced diagnostic time by 65% for healthcare professionals

- Executed deployment as a production-ready API on Hugging Face, with 98% uptime
- **Technologies:** Python, PyTorch, Hugging Face, Docker, RESTful APIs

CNN-Based Plant Disease Detection arpy8/Plant

- Constructed a custom Convolutional Neural Network (CNN) model achieving 90% accuracy across 38 different plant disease categories
- Instituted a systematic validation approach with 5-fold cross-validation to ensure model reliability across diverse plant species
- Developed and deployed a web application enabling real-time disease diagnostics with average response time of 1.5 seconds
- **Technologies:** Python, TensorFlow/Keras, FastAPI, RESTful APIs, Docker, Streamlit