Vansh Bhatnagar

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SUMMARY

I'm a full-stack developer and machine learning engineer who loves building AI systems and scalable backends. I've spent much time working with PyTorch and TensorFlow to build and fine-tune ML models. My bread and butter are neural networks, retrieval-augmented generation, and generative AI. I specialize in designing end-to-end machine learning pipelines and crafting high-performance distributed systems in the cloud.

WORK EXPERIENCE

ShadowFox Technologies | AI/ML Intern **Aug 2024 - Sep 2024**

- Machine learning algorithms were used to improve application performance, resulting in 25% reduction processing time and 10% improvement in accuracy.
- The integration of the OpenAI API in the platform played a key role in increasing user engagement by 35% and satisfaction by 70% for the chatbot system.

CodeAlpha | Full Stack Intern **Jul 2024 - Aug 2024**

- Designed user-friendly mobile applications making it simple to submit forms by combining data and geo-tag functionality, offering 40% faster submissions and 15% less errors. Utilized such tools as Nginx for smooth server maintenance and Gradle for significantly simplifying build process.
- To accelerate and enhance deployments and embraced Docker container. Not only did this approach reduced deployment times by 50% but it also enhanced the overall performance of the system as a whole, enhancing the web applications' solidity and scalability.

Acmegrade | Cloud Computing Intern **Nov 2023 - Feb 2024**

- Conducted trend analysis for AWS, Azure, and GCP to identify the most appropriate market opportunities.
- Applied Docker containerization technology in the existing cloud configuration which improved the resource utilisation time b 40%.
- Collaborated with cross-functional teams in debugging and resolving technical issues with respect to cloud platforms, achieving a 20% boost in system uptime.

SKILLS

- AI/ML Development: TensorFlow, PyTorch, Neural Networks, Natural Language Processing, Computer Vision, Random Forest, XGBoost, CatBoost, LightGBM, Deep Neural Networks, LangChain, LangGraph
- Cloud & Infrastructure: AWS, GCP, Azure, Terraform, Ansible, Cloud Security Protocols
- DevOps & Automation: Jenkins, Git, Docker, Orchestration & Configuration Management
- Backend Development: Django, Flask, Express, GraphQL, WebRTC Integration
- Database Management: MongoDB, PostgreSQL, pgAdmin, Lucidchart, ER/Studio
- Testing & Quality Assurance: Selenium, Jenkins, Grafana, CI/CD
- Soft Skills: Interactive, Adaptability, Teamwork, Time Management

RELEVANT PROJECTS

LangGraph CyberSecurity Agent | github.com/Vansh41104/LangGraph-CyberSecurity-Agent **Feb 2025 -Mar 2025**

- Developed an end-to-end cybersecurity product on LangGraph to create intelligent, multi-agent applications with Large Language Models (LLMs).
- Used integrated scanning tools for vulnerabilities like Nmap, Gobuster, FFUF, and SQLMap to scan for possible security vulnerabilities in infrastructure.

News Webpage Semantic Analysis Tool | github.com/Vansh41104/News_Semantic_Summarizer **Jan 2025 – Feb 2025**

- Built an NLP-based web app for analysis of news articles utilising in Python, spaCy, and TextBlob which extracts text and generates output such as entities, sentiment, and keywords.
- Integrated Groq's AI API to generate refined article summaries and an intuitive Gradio interface for seamless user interaction.

AI Based Grass and Milk Production Predictor | github.com/Vansh41104/FarmML_Project **Sep 2024 – Dec 2024**

- Improved a Deep-Learning-based computer vision system to scan farm photos to evaluate the quality of the grass and forecast yield.
- The solution uses image processing algorithms to scan important features such as colour, texture, and morphology to produce quality indexes and weight prediction with high accuracy.

AI Based Disease Detector | github.com/Vansh41104/AI-Based-Disease-Detector **Oct 2024 - Nov 2024**

- Built an AI-based diagnostic system based on deep learning models that identify respiratory illness (lung cancer, tuberculosis, pneumonia) from chest X-rays.
- Engineered a convolutional neural network model, achieving a 95% accuracy in processing over 10,000 medical images; implemented rigorous validation protocols that minimized false negatives and amplified diagnostic reliability.

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EDUCATION

B. Tech in Computer Science **Sep 2022 – June 2026**

- Techno India NJR Institute of Technology, Udaipur, Rajasthan

Senior Secondary Education **May 2019 - April 2022**

- St. Anthony's. School, Udaipur, Rajasthan

ACHIEVEMENTS

- Led a team in creating an AI-driven medical diagnostic system for rural societies in the **CodeRed 4.0 Hackathon** and stood 2nd overall.
  - Designed and executed an artificial intelligence model for the analysis of X-rays and CT scans to predict potential diseases
  - Contributed towards making advanced medical diagnostics accessible to deprived rural societies.

- Received a **Letter of Recognition from WHO** for developing an interactive monitoring platform for unvaccinated children.
  - Implemented a geo-tagged dashboard to effectively track and display vaccination coverage.
  - Created a complete system for monitoring daily vaccine events in real time.