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Ayush Agarwal

Technical Skills : Python, Java, C++, LangChain, Transformers, PyTorch, TensorFlow, OpenCV, Pandas, NumPy, SQL

Certification:

- Generative AI – Google Cloud Skill Boost
- The Bits and Bytes of Computer Networking – Coursera
- Fundamentals in AI and ML – Vityarthi
- Introduction to Machine Learning – NPTEL

| EDUCATION | | | |
|--------------------|----------------------|------------------------------------|-----------------|
| Board | Tenure | Educational institution | CGPA/Percentage |
| B. Tech (CSE) Core | Sep 04,2023 –Ongoing | VIT Bhopal University , Bhopal | 8.63/10 |
| Class XII | 2022 | DAV Public School , Ranchi | 88.0% |
| Class X | 2020 | DAV Nandraj Public School , Ranchi | 91.0% |

| Academic Projects | |
|----------------------------------|---|
| LLM’s and Fine Tuning | <p>Legal AI Android & Web App <i>(June 2025 – Ongoing)</i></p> <ul style="list-style-type: none">• Description: Designed backend for an AI legal assistant with fine-tuned legal LLMs and a RAG pipeline. Enabled statute retrieval, legal query answering, and multilingual clause analysis.• Technology: Python, FastAPI, FAISS, LangChain, MongoDB, InLegalBERT, Hugging Face, CUAD, Firebase, AWS, PostgreSQL• Team Project: 4 Member• Role: Backend Developer (LLM fine-tuning, RAG architecture, API development) |
| Generative AI/Prompt Engineering | <p>Medical Chat Summary & Risk Scoring System <i>(May 2025 – July 2025)</i></p> <ul style="list-style-type: none">• Description: Built a system to summarize patient–doctor chats and score medical risk based on symptoms using LLMs and rule-based classifiers.• Technology: Hugging Face Transformers, LangChain, FastAPI, NLTK, Scikit-learn• Team Project: Individual• Role: NLP Developer (chat summarization, keyword extraction, scoring algorithm) |
| Machine Learning | <p>Multimodal Emotion Recognition (WESAD Dataset) <i>(Jan 2025 – May 2025)</i></p> <ul style="list-style-type: none">• Description: Developed an emotion detection system using physiological and motion sensor data (WESAD) with fusion of EDA, EMG, and accelerometer signals.• Technology: Python, NumPy, Pandas, Scikit-learn, XGBoost, LSTM, Matplotlib• Team Project: 3 Members• Role: ML Engineer (data preprocessing, feature engineering, model training) |
| Computer Vision | <p>Video Manipulation Detection App <i>(Dec 2024 – Ongoing)</i></p> <ul style="list-style-type: none">• Description: Designed a backend pipeline to detect deepfake and tampered content using object tracking (DETR), optical flow, and metadata inconsistencies.• Technology: Python, OpenCV, MediaPipe, YOLOv8, Scikit-learn, FastAPI, Streamlit, FFmpeg• Team Project: Individual• Role: Backend Developer (model integration, optical flow analysis, API developmentt) |

| Experience | |
|--|--|
| Technical Team Member and Collaborator | <p>Linpack Club, VIT Bhopal University (Duration: 2024 – Present)</p> <ul style="list-style-type: none">• Collaborated on projects involving MATLAB and Artificial Intelligence.• Participated in group discussions, technical workshops, and hands-on sessions.• Contributed to team-based projects, fostering a collaborative learning environment. |

| CO-CURRICULARS | |
|----------------|--|
| Coding | <ul style="list-style-type: none">▪ Solved 125+ problems on LeetCode |

| EXTRA-CURRICULARS AND ACHIEVEMENTS | |
|------------------------------------|--|
| Achievements | Runner-Up – <i>FinGen AI Hackathon</i> Secured 2nd place in an AI-focused fintech hackathon by developing an innovative Generative AI solution under time constraints. |
| Responsibilities | Technical Team Member, Linpack Club - VIT Bhopal University |
| Extracurricular | Playing Volleyball - Represented Team Thunders in <i>Avahan</i> , the official sports fest of VIT Bhopal University. |

| ADDITIONAL INFORMATION | |
|------------------------|--|
| Hobbies | <ul style="list-style-type: none">▪ Playing Guitar and Games |
| Languages | <ul style="list-style-type: none">▪ English, Hindi |