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

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

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

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"><li>▪ Playing Guitar and Games</li></ul>
Languages	<ul style="list-style-type: none"><li>▪ English, Hindi</li></ul>