Vedansh Kapoor

📱 +91 8619130667 | @ vedanshkapoor123@gmail.com | 🔗 LinkedIn | ⭕ GitHub | 📍 Jaipur, India

EDUCATION

Indian Institute Of Technology Bhilai   Oct 2022 – Ongoing (2026)
B.Tech in Engineering   *CGPA: 8.00/10.00*

EXPERIENCE

Tech Mahindra

AI/ML Intern   *May 2025 – June 2025*

- Automated BRD-FSD gap analysis (**LLaMA 3, AWS Bedrock/S3**), **cutting reconciliation by 20%**.
- **Engineered LLaMA 3 prompts** for **95%+ accurate** identification of banking requirement gaps.
- **Developed** automated FSD/DFD **PDFs (ReportLab, LLM driven)**, **cutting manual effort by 20-30%**

Matrice AI

AI/ML Intern (Vision specialist)   *May 2025 – Ongoing*

- Led **20+ AI/ML vision use cases** with **custom/SOTA models (MONAI, SimpleITK, OpenCV)**, boosting accuracy **by 22%** for **ML-based video annotation**.
- Built **scalable video pipelines** with OS-level threading, cutting processing time by **50%**.
- Integrated models into a **no-code AI platform** with real-time fine-tuning; scaling deployment using **Go**, **Kafka**, and **VMS plugins**, boosting throughput by **3 times**.

TIH-IoT Chanakya Fellowship, IIT Bombay   Certificate
Data Science Intern (Project Captain)   *March'24-Dec'24*

- Developed an object detection model for UAV landing, boosting accuracy by 30% through fine-tuning.
- Optimized inference pipeline with parallel processing and compressed UAV architecture by 25%.
- **Technologies used**: CNN, YOLOv8-tiny, Open-CV, Transformers and Quantization

SKILLS

Languages: C/C++, Python, Java, GO, SQL, MATLAB, R, CUDA, Latex
Data Science: TensorFlow, PyTorch, Keras, Scikit-learn, XGBoost, Transformers, LLMs, Generative AI, Computer Vision, NLP, Time Series, Reinforcement Learning, Multi-Modal transformers and foundational Models
Web Development: Javascript, HTML, CSS, ReactJS, Google Cloud
Tools: Docker, Kubernetes, CI/CD, MLflow, FastAPI, Flask, Git, Kafka, Sphinx

PROJECTS

Automated Pipeline for Audio Story Generation | *GitHub*

- **2-Mode Input (Text/Audio)**: Converted Hindi/English stories to structured narratives by **Whisper AI**.
- **4-Step Story Enhancement**: Applied **GPT, NER for scene/plot detection and character mapping.**
- **AI-Powered TTS**: Generated expressive audio stories using **Tacotron, WaveNet** for lifelike narration.
- **Pro Audio Integration**: Used **pydub, ffmpeg** for background music and effects for immersive storytelling

Smart HVAC: AI-Driven Energy Optimization for Industry 5.0 | *GitHub*

- **Objective:** AI-powered HVAC system optimizing energy use, reducing costs in smart buildings.
- **Data Processing:** Used feature selection, scaling (MinMax, Standard, Robust), and handled missing values.
- **Optimization:** Applied **Teaching Learning Based Optimization (TLBO)** for hyperparameter tuning.

Road Connectivity and Infrastructure Prediction System | *GitHub*

- Developed a model to determine road viability in rural/hilly areas and identify roads needing upgrades with 85% accuracy, using population, traffic, economy, and tourism data. **Technologies used: Data Analytics, Graph Neural Networks, DEM Datasets, Geospatial Libraries, Floyd-Warshall Algorithm.**

ACHIEVEMENTS

ALL India Hackathon winner: Winner in hackathon conducted by IIIT Raipur Hack-A-Sol 2024 in AI/ML track.
Amazon ML Challenge: Ranked in Top 0.5% (Rank 334) at Amazon ML Hackathon 2024 (75000+ applicants).
International Physics Olympiad (IPhO) 2020: Ranked top 30/200,000 world-wide & awarded a bronze medal.
KVPY (2020): Qualified for Fellowship, the Kishore Vaigyanik Protsahan Yojana (KVPY).

POSITIONS OF RESPONSIBILITY

Procurement and Publicity Head at the Annual Techno-Cultural Fest of IIT Bhilai
Core Member: Theatre club, Photography club