ANUSHKA RANJAN

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EDUCATION

Vellore Institute of Technology
Bachelor of Engineering degree
Computer Science Engineering, Specialization in Health Informatics
CGPA: 8.68/10

SKILLS

- **Languages:** Python, SQL
- **Libraries/Frameworks:** NumPy, Pandas, Matplotlib, Scikit-learn, LangChain, PyTorch
- **Tools/Platforms:** Power-BI, GitHub, Jupyter Notebook, VS-Code

INTERNSHIP

NexaWorks (IT Services and Consulting)
AI/ML Developer Intern

- Assisted in making an RAG system by integrating a specialized knowledge base with a vector database, enhancing answer accuracy, and enabling semantic search for rapid, relevant document retrieval.
- Developed a CoT reasoning agent with source attribution to improve model interpretability, increase user trust by providing verifiable references, and mitigate generative inaccuracies.

AI/ML Universe (Under NIT Pondicherry Alumni)
Data Science Research and Blogging Intern

- Authored and published 10+ in-depth blog posts on data science, covering algorithms, real-world applications, and industry trends, reaching 120+ readers per article.
- Simplified complex ML concepts for a broad audience using clear explanations, real-world examples, and visuals, significantly improving reader engagement.

UNIVERSITY PROJECTS

Pregnancy Risk and Fetal Health Prediction, *[Python, Streamlit, Machine Learning]*

- Developed an AI-powered maternal and fetal care application that predicts pregnancy risks; achieved 95% precision in predicting high-risk pregnancies based on patient data and risk factors.
- Implemented key features, including a guided meditation section for mental wellness and a trimester-based To-Do list, helping users plan essential pregnancy tasks and track their progress.

PM2.5 Prediction & AQI Risk Modeling, *[Python, XGBoost, Matplotlib]*

- A machine learning based web application to forecast PM2.5 pollution levels in Delhi, integrating historical air quality data.
- Designed dashboards and geospatial maps to visualize pollution hotspots. A dynamic AQI calculator with EPA-standard breakpoints and health recommendation system that categorizes results with color-coded alerts.

AskMyDoc - AI Document Helper, *[RAG, LLM, FAISS]*

- AskMyDoc,a comprehensive document analysis tool for QandA of PDF files, Text summarization, and AI content detection.
- Engineered a data pipeline using LangChain and FAISS to process and embed document content, enabling efficient retrieval and analysis.

CO-CURRICULAR & ACHIEVEMENTS

- John Hopkins and VITB Health Hackathon – Built an AI-powered spirometer that integrates multiple sensors, achieving 90% + precision in the detection of chronic lung diseases through exhaled breath analysis.
- CTF manager at OWASP Club
- Content writer at GeeksforGeeks student chapter.