HIMANSHU GANGWAR

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Experience

- **Whissle AI** *March 2024 – July 2024*
  AI/ASR Intern California (Remote)
  - Developed and optimized Meta's Automatic Speech Recognition (ASR) models, improving transcription accuracy across multiple languages and acoustic environments
  - Engineered comprehensive data preprocessing pipelines and annotation workflows for large-scale ASR training datasets, ensuring high-quality labeled speech data for model development
  - Researched and benchmarked cutting-edge speech recognition architectures including transformer-based models, conducting comparative analysis to identify performance improvements and deployment feasibility

Projects

- **Arya Bhatt Hostel AI Agent** *[]*
  Tools: Streamlit, LangChain, ChatGroq API, Pinecone
  - Built an AI agent for Arya Bhatt Hostel using ReAct framework, capable of handling queries and automating tasks.
  - Used Groq for fast LLM inference, Pinecone for vector search, and Sentence-Transformers for semantic retrieval.
  - Enabled features like mess menu lookup, hostel photo retrieval, and multi-step complaint registration.
  - Deployed a responsive Streamlit interface with chat history and dynamic content display.
- **MEDGraphy: Graph RAG Drug Information App** *[]*
  Tools: Streamlit, Python, Neo4j, Groq, Sentence-Transformers
  - Developed an intelligent drug information application using a Graph RAG architecture to provide context-aware answers from a knowledge graph.
  - Engineered a Neo4j graph database to model and query complex relationships.
  - Integrated Groq API for high-speed LLM inference (Llama3-8B) and Sentence-Transformers for semantic vector search.
  - Deployed a responsive Streamlit interface featuring multiple query modes and an interactive graph visualization of the medical knowledge
- **Hand Written digit prediction Project** *[]*
  Tools: CNN, Python, MNIST, ViT, Google Colab
  - Developed a handwritten digit recognition system using the MNIST dataset with two distinct deep learning models: Convolutional Neural Network (CNN) and Vision Transformer (ViT).
  - Implemented and trained both models separately, comparing their performance in terms of accuracy and generalization.
  - Achieved over 98% accuracy with CNN and competitive results with ViT using PyTorch.
  - Deployed an interactive Streamlit web app enabling users to draw digits and view predictions from both models in real-time.

Education

- **Institude of Engineering and Technology** *Sept 2023 – Sept 2027*
  B.Tech in Computer Science and Engineering (AI) Lucknow, India
  - CGPA: 7.9/10.00

Technical Skills

- **Languages:** Python, C++, C, Java
- **Web/Deployment:** Streamlit, HTML, Render, Vercel
- **Databases:** Pandas, Neo4j, MySQL, Pinecone, Faiss
- **Technology/Frameworks:** GitHub, Tensorflow, Scikit-learn

Certifications & Achievements

- Prompt Design in Vertex AI (Skill Badge), Google Cloud — View Credentials
- Machine Learning Ops with Vertex AI, Google Cloud — View Credentials
- AI Agents in LangGraph, DeepLearning.AI — View Credentials
- Won Collage level hackathon
- Top 1% in Uttarakhand Board 2023(Class 12), Uttarakhand Board