ANSH KUMAR NIMBORIA

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SUMMARY

Final-year B.Tech Computer Science student with a robust academic and practical foundation in machine learning, deep learning, and full-stack development. Adept at designing, building, and deploying scalable applications using technologies like Python, TensorFlow, FastAPI, React, and Docker. Demonstrated experience in leading and executing end-to-end AI-driven projects, including real-time image classification systems and natural language processing tools. Highly motivated to leverage technical skills to develop innovative solutions that address real-world problems. A quick learner and effective communicator with a collaborative mindset, consistently striving for excellence in both individual and team-based projects. Open to new challenges and passionate about continuous learning and growth in the evolving field of technology.

SKILLS

- **Programming Languages:** Python and R
- **Libraries/Frameworks:**
  - • Machine Learning: scikit-learn, TensorFlow, transformers, torch
  - • Natural Language Processing: nltk, spacy
  - • Frontend/Backend: React.js, FastAPI
  - • Game Development: Pygame
- **Data Handling:** pandas, numpy
- **Tools & Platforms:** Git, Jupyter Notebook, VS Code, Pycharm, Docker, Google Cloud, TensorFlow Serving
- **APIs:** WolframAlpha API, requests
- **Soft Skills:** Teamwork, Communication, Problem-Solving

EDUCATION

- **S.R.M. University, Sonepat, Haryana**
  Bachelor of Technology in Computer Science with specialisation in DS & AI
  July 2021 – Present

- **Guru Harkrishan Public School, Nanak Piao, New Delhi**
  CBSE (Class X & XII, PCB)
  2007 – 2021

PROJECTS

Potato Disease Classification using CNN | LINK

- Designed and trained a custom **CNN** to classify potato leaf images into *Early Blight*, *Late Blight*, and *Healthy* classes using the PlantVillage dataset.
- Achieved **90%+ accuracy** through optimised architecture and data augmentation.
- Created an end-to-end deployment pipeline:
  - **Backend:** Developed APIs using **FastAPI** to handle image input and return a prediction.
  - **Model Serving:** Deployed the model using **TensorFlow Serving in Docker** containers.
  - **Frontend:** Built a dynamic web interface using **React.js** with image upload and results view.
- Technologies: TensorFlow, NumPy, Pandas, Docker, React.js, FastAPI, Matplotlib

Virtual Assistant (Jarvis) | LINK

- Developed a **voice-controlled personal assistant** in Python capable of executing everyday tasks via voice commands.
- Integrated **speech recognition, text-to-speech (TTS)**, and external APIs for real-time interaction.
- Features implemented:
  - Set alarms and manage system apps (e.g., open YouTube, Chrome, etc.).
  - Fetch current weather, news, and general Q&A using **Wolfram Alpha API**
  - Note-taking and recall via in-memory storage
  - Basic calculator, timer, and voice command loop
- Libraries: pyttsx3, speech_recognition, datetime, requests, json, WolframAlpha

Phishing Detection using BERT (NLP) | LINK

- Built a phishing detection system using a fine-tuned **BERT** model to classify URLs into **low**, **medium**, and **high-risk** categories.
- Preprocessed data using tokenisation and padding with the **Hugging Face transformers** library.
- Evaluated model with performance metrics:
  - Overall Accuracy: **74%**
  - F1-score (Medium Risk): **79%**
- Implemented a modular ML pipeline with preprocessing, training, evaluation, and inference scripts.
- Tools & Libraries: BERT (transformers), PyTorch, Pandas, Scikit-learn, NumPy

CERTIFICATIONS

- Introduction to Python - IBM | LINK
- Artificial Intelligence Analyst - IBM | LINK
- Machine Learning with R - IBM | LINK
- Cloud Application Developer - IBM | LINK