Rahul Prajapati

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Summary

Aspiring AI engineer and BTech Computer Science student at Gautam Buddha University (CGPA: 8.52) with a strong foundation in DSA, ML, and software development. Qualified GATE 2025 in CS. Skilled in Python, Java, C++, and JavaScript with hands-on experience in building tools like a Health Report Analyzer, Medicine Recommender, and an Emotion-Preserved Voice Cloning system. Certified in ML and Data Science by Stanford, IBM, and Samsung. Proficient in LLM and Generative AI concepts using LangChain, RAG, OpenAI, Ollama, and LLama3 models. Passionate about solving real-world problems with technology and building scalable intelligent systems.

Education

Gautam Buddha University **Sep. 2022 – Ongoing**

Bachelor of Technology in Computer Science Engineering; CGPA: 8.52 *Greater Noida, Uttar Pradesh*

Kendriya Vidyalaya Arjangarh **Delhi, India**

Central Board of Secondary Education (CBSE); Class 12: 87.6% *2022*

Experience

Samsung Innovation Campus **June 2024 – July 2024**

Greater Noida, Uttar Pradesh

- Collaborated on a project to forecast air quality across regions using historical pollution levels and environmental data.
- Collected and integrated data from government air monitoring systems, weather stations, and traffic reports.
- Performed data preprocessing, including cleaning, normalization, and feature engineering to capture temporal patterns.
- Conducted exploratory data analysis (EDA) and developed predictive models to assess pollutant concentration trends.

Projects

AI InterviewSim | *Python, LangChain, Ollama, HuggingFace, Gradio, FastAPI, NLP, LLMs* **June 2025 – Present**

- Currently developing an AI-powered interview simulation platform where users practice interviews with an intelligent recruiter that dynamically generates role-specific questions based on the user's resume or selected job title.
- Skills and Technologies Used: Employing Python, LangChain, Ollama (for running local LLMs like LLaMA3), HuggingFace Transformers, NLP techniques, Gradio for frontend, and FastAPI for backend infrastructure.
- Real-World Impact: Aims to help job seekers prepare effectively through a personalized, adaptive, and low-pressure mock interview environment, enhanced by follow-up questioning and performance feedback.
- Focuses on integrating resume parsing, prompt engineering, dynamic follow-up logic, and local model inference using free and open-source tools, demonstrating practical AI application without cloud API costs.

ToneSwap | *Python, PyTorch, FFmpeg, Librosa, Speaker Embedding, and WavLM* **May 2025**

- Developed a real-time voice conversion system using a Gradio UI frontend and FreeVC (zero-shot voice conversion) backend, allowing users to input any audio format and convert voices while preserving emotion, tone, and linguistic content.
- Skills and Technologies Used: Employed Python, PyTorch, FFmpeg, Librosa, Speaker Embedding, and WavLM for audio preprocessing, model inference, and embedding extraction, ensuring model-agnostic content and style transfer.
- Real-World Impact: Enables applications in content creation, virtual avatars, accessibility tools, and personalized digital assistants, allowing speech synthesis without large datasets or explicit voice training.
- Integrated pretrained deep learning models, signal processing, sampling rate conversion, zero-shot learning, and speaker adaptation, demonstrating proficiency in applied AI/ML for audio.

Heartlink (Dating Application) | *Java, Android Studio, Google Firebase* **February 2024**

- Designed a user-friendly interface for seamless navigation and interaction.
- Developed the app using Java and Android Studio for robust functionality on Android.
- Integrated Google Firebase for real-time connectivity and synchronization.
- Ensured data privacy and integrity with Firebase's built-in security features.

Technical Skills

Languages: Python, Java, C/C++, JavaScript

Frameworks: Flask, React.js, Node.js, Express.js, LangChain

Libraries: NumPy, Pandas, Matplotlib, scikit-learn, TensorFlow, Keras, PyTorch, Plotly, Librosa, Torchstudio

Tools: Git, GitHub, VS Code, Jupyter Notebook, MongoDB, Render, Netlify, Canva, PowerPoint, Docker

Skills: Machine Learning, Artificial Intelligence, Generative AI, LLMs, RAG Pipelines, Data Analysis, Collaborative Filtering, Web Development (Basic), Android Development (Basic)

Achievements

Qualified **GATE 2025** in Computer Science with strong performance in core subjects like DSA, Algorithms, and Operating Systems.

Certifications

Machine Learning Specialization by Stanford University — View Certificate

Data Science Course by IBM — View Certificate

AI/ML Certification by Samsung Innovation Campus — View Certificate