ARCHIT PRASAD

Cloud Computing & AI Engineer

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PROFESSIONAL SUMMARY

Cloud Computing & AI Engineering student adept at architecting scalable full-stack applications using Python, AWS, and LangChain. Proven ability to optimize workflows by 90% through intelligent automation and RAG pipelines.

EDUCATION

VIT Bhopal University **Bhopal, India**

B.E. in Computer Science Engineering (Cloud Computing) *2022 – 2026*

- **CGPA:** 7.79/10
- **Relevant Coursework:** Object-Oriented Programming (OOP), Machine Learning, Cloud Computing, Database Management Systems (DBMS).

TECHNICAL SKILLS

- **Languages:** Python, SQL, C++.
- **AI/ML Libraries:** PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, OpenCV, LangChain.
- **Web Frameworks:** FastAPI, Flask, Streamlit.
- **Tools & Platforms:** AWS (EC2, S3), Git/GitHub, Docker, Firebase, n8n, Postman.
- **Databases:** PostgreSQL, MongoDB, ChromaDB (Vector DB), Cloud Firestore.
- **Visualization:** Power BI, Tableau, Seaborn, Matplotlib.

TECHNICAL PROJECTS

Conversational Data Analysis Agent (GenAI) **Sep 2025**

- Architected a ReAct (Reasoning and Acting) agent using LangChain to parse natural language into executable Python code, automating data analysis tasks.
- Engineered high-precision prompts for Mistral-7B via Hugging Face API, enabling the synthesis of complex code to handle 30+ unique Pandas operations on datasets up to 50MB.
- Deployed the full-stack agent on Streamlit with session state management, reducing data exploration time by 90% for non-technical stakeholders.

Docs-Bot (RAG-Based Chatbot) **Sep 2025 – Oct 2025**

- Developed a Retrieval-Augmented Generation (RAG) system that unifies diverse data formats (PDFs, TXT, URLs), improving information retrieval speed by 95%.
- Implemented a vector search pipeline using ChromaDB and 'sentence-transformers' embeddings, leveraging the Groq API for sub-second LLM inference latency.
- Integrated source-citation features in the UI to verify accuracy, resulting in a 100% transparent generation process for users.

AI Audience Analytics System **2025**

- Built a real-time audience demographics detection system using Computer Vision, achieving reliable face detection on live video feeds.
- Optimized the backend using Flask and OpenCV to process video frames with low latency, integrating Firebase Auth for secure access control.
- Designed a dynamic dashboard with Tailwind CSS and Chart.js to visualize aggregated age and gender data for 500+ potential data points.

Facial Recognition System **Jul 2024 – Sep 2024**

- Constructed a facial recognition model using a Siamese Network architecture, achieving 92.5% accuracy across a test set of 1,000+ images.
- Implemented facial landmark detection to generate 128-D vector embeddings, enabling efficient $O(1)$ similarity comparisons against a user database.
- Engineered an automated testing suite with 50+ test cases, reducing manual model verification time by 8 hours per month.

CERTIFICATIONS

- **Oracle Foundations Associate** – Oracle Sep 2025
- **Data Analytics Job Simulation** – Deloitte Jun 2025
- **DevOps Fundamentals** – IBM (Covered CI/CD, Containerization) Apr 2025

ACHIEVEMENTS

- **Finalist**, IIIT UNA Hackathon: Competed among 50+ teams to build innovative software solutions.
- **Finalist**, Dataverse Hackathon (DTU): Recognized for excellence in data-driven problem solving.
- **Top 12**, ZS Beats Global Analytics Competition: Ranked in the top tier of participants globally.