Sanjna Bali

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Summary

Final-year Computer Science student with a strong foundation in **Artificial Intelligence, Machine Learning, and Deep Learning**, backed by hands-on projects and core understanding of mathematical concepts like **Linear Algebra and Calculus**. Deep-Minded about building **intelligent systems** and actively **seeking opportunities** to contribute to real-world AI applications and innovative **research** as an entry-level **AI/ML engineer/Data scientist.**

Education

GNA University **Jun 2026**

Bachelor Of Technology, Computer Science & Engineering (CGPA: 8.5, 6th Semester SGPA: 9.43)

- **Coursework:** Software Engineering, Object-Oriented Programming, Data Structures & Algorithms, Networks, Discrete Math, Linear Algebra, Probability & Statistics, Calculus, Machine & Deep Learning, DBMS, Google Cloud training by GOOGLE.

Experience

Central Scientific Instrumentation Research - CSIO Chandigarh, India **Jun 2024 - Aug 2024**

Machine Learning and Generative AI Intern[Skills: LLMs, RAG, Chromadb, ML, Faiss, flask, NLP, Collaboration, Research]

- Developed a Python-based AI-powered RAG query agent integrating FAISS, which enhanced research query resolution for the Material Science department by **increasing response accuracy by 33% and reducing latency by 50%.**
- **Optimized system performance** by doubling throughput, reducing manual effort by 40%, and decreasing processing time from 10 minutes to 3 minutes.

AIESEC, Jalandhar **Mar 2023 - Sep 2023**

Member of Business Development and External Relations[Communications, Marketing, Event Management, Business development]

- Led a team in **organizing LPU's largest career fair with over 1000 participants and 25+ corporate leaders.**
- Established and managed **strategic collaborations** with national and international partners, enhancing student participation in **cross-cultural exchange programs**.

Projects & Awards

GNA Inter-University Hackathon 2024, India **May 2024**

GNA Inter-University Hackathon 2024[skills: Computer Vision, Deep Learning, Pipeline, Integration, OpenCV, Communication]

- **Achieved 1st place out of 100 participants** in the GNA Inter-University Hackathon by delivering effective presentations and securing the top position and **Earned a direct internship** offer post-event.
- Built a solution on **Fake Deep Synthesis & Deepfake Detection** using AI, Received Award by HACKTIFY.

NetElixir Hackathon 2024 | Python, Machine Learning Algorithms **Jul 2024 - Sep 2024**

NetElixir Hackathon 2024[Matplotlib, NLP, Machine Learning Models, Scikit-learn, Marketing, Business]

- Created **AI-driven media investment planner** using ML models.
- Improved targeting and ROI predictions through regression-based forecasting.

Brain Tumour Detection | Computer Vision, Python, Deep Learning **Nov 2024 - Present**

- Engineered a **privacy-preserving** AI system to **detect brain tumours** from MRI scans using **Federated Learning**, enabling mo de training across multiple data sources without sharing sensitive patient data.
- Integrated advanced deep learning architectures including **ResNet-UNet, Inception, GoogLeNet, and Xception** to enhance segm entation and classification accuracy of brain tumour detection models beyond 90%.

GooglexKaggle Competition | Chest-Xray Interpreter **Mar 2025 - Apr 2025**

GooglexKaggle Competition [skills: NLP, SQL, chromaDB, Google Gemini, Prompt Engineering, RAG,Function calling, APIs]

- Built a GenAI-powered assistant using **RAG to interpret Chest X-rays and medical PDFs**.
- Leveraged **Google Gemini and Chroma DB** for real-time, multimodal medical Q&A.

Technical Skills

- **Programming Languages:** C/C++, Python, SQL, Java
- **Frameworks & Tools:** Tensor Flow, PyTorch, Matplotlib, Scikit-Learn, Google Colab, FAISS, Flask, GitHub/Git, CI/CD
- **AI Specialization:** NLP, Generative AI, Computer Vision, LLMS, Research, Prompt Engineering, Vector Indexing
- **Algorithms:** Data Structures & Algorithms, Machine Learning Algorithms, Deep Learning Algorithms, Transformers, RAG.
- **Data analysis Techniques:** Exploratory Data analysis, Regression, Classification, Feature Engineering, Power BI, Tableau
- **Databases & Cloud Technologies:** SQL, Google Cloud, Docker.
- **Analytical Thinking:** Problem-Solving, Root Cause Analysis, Decision Making
- **Communication:** Technical Presentations, Documentation, Report Writing, Public speaking, Confidence
- **Collaboration & Leadership:** Team-Work, Cross-Functional Engagement, Fast-Learning, Commitment, Highly motivated

Extracurricular Activities

BRS Alumni | Dr. Kiran Bedi (India's First woman IPS officer) | Communication **July 2022 – Present**
Member | Google Woman In tech **August 2024- Present**
Technical and Coding Instructor | Mentor | Event | GNA University **May 2025**
University Technical Event | Host **January 2025**