Vinay R Jumani

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Objective

Aspiring AI Hardware and Deep Learning Engineer passionate about building intelligent systems, solving real-world problems, and contributing to impactful technology.

Education

BITS Pilani, Goa Campus — *Goa, India*
B.E. in Electronics and Instrumentation — *Expected May 2028*

Projects

- **ResNet Project** — GitHub
  Trained a ResNet-18 model on the CIFAR-10 dataset using PyTorch. Achieved 90% accuracy by implementing data augmentation, learning rate scheduling, and mixed precision training.
- **RAG Chatbot** — GitHub
  This project implements a simple yet functional Retrieval Augmented Generation (RAG) chatbot. The chatbot answers user queries based on the content of a provided research paper (PDF format). It combines text retrieval and large language models (LLMs) to generate accurate and contextually relevant responses.
- **OpenCV and MediaPipe** — GitHub
  Built a hand detection and a basic game using OpenCV and MediaPipe
- **CoreML (SAIDL Spring Assignment)** — GitHub
  Worked on implementing the APL framework by adjusting noise levels and comparing the APL with other frameworks.
- **Multi-Modality (SAIDL Spring Assignment)** — GitHub
  Implemented Graph Neural Networks (GNNs) for multi-modality learning.
- **Miscellaneous** — Instructables (profile)
  Basic electronics projects from grade 9, including a self-watering plant system. Also worked extensively with 3D printers (FDM).
- **In Progress:**
  - **AI-Based Rubik's Cube Solver** – using neural networks and computer vision
  - **AI Hardware Optimization SaaS Tool** – lightweight benchmarking + model optimization platform
  - **Drone DL** – working on a drone project as well
  - **Agentic AI Production** – currently working with production-grade agentic AI systems

Skills

- **Programming:** Python, C/C++, JavaScript, Solidity (blockchain smart contract)
- **Tools/Frameworks:** PyTorch, TensorFlow, Git, Fusion 360, OpenRocket, CrewAI, OpenCV, MediaPipe, MERN Stack
- **Hardware:** Raspberry Pi, Arduino, Sensors, Microcontrollers, 3D Printing
- **Traits:** Extremely fast learner

Achievements / Certifications

- Deep Learning Specialization by Andrew Ng – Coursera (link)
- FIDE Chess Rating: 1852 – Represented India at National/International level multiple times (link)
- JEE Advanced 2024: Rank 10,452 (CRL) – Top 5% of candidates
- JEE Mains 2024: Rank 18,021 (CRL) – Top 2% of candidates
- CBSE Board: Class 10 – 97%, Class 12 – 97%

Extra-Curricular Activities

- Core Member – Electronics and Robotics Club, SEDS Celestia Rocketry Club, Developer's Society AI/ML, Center for Entrepreneurial Leadership (CEL), BITS Goa
- Formed a developers community in college with over 300+ community members. Involves verticals like AgenticAI, GenAI, DL, EdgeAI, OpenSource and Vibe Coding
- Sports – Professional Chess Player