Nalish Jain

LinkedIn
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Education

- **Indraprastha Institute of Information Technology Delhi** — Delhi, India
  Bachelor of Technology - Computer Science and Artificial Intelligence; CGPA: 9.86 — *Dec 2021 - May 2025*
- **DAV Public School, Sreshtha Vihar** — Delhi, India
  CBSE 12th Board; Percentage: 98 — *Apr 2019 - Mar 2021*
- **Bal Bharati Public School, Brij Vihar** — Uttar Pradesh, India
  CBSE 10th Board; Percentage: 97.6 — *Apr 2007 - Mar 2019*

Skills

- **Languages:** Python, C++, C, Java, SQL
- **Tools & Frameworks:** PyTorch, TensorFlow, Keras, Numpy, Pandas, Scikit, NLTK, MySQL, Git, LibGDX, VSCode, IntelliJ IDEA, Figma
- **Courses:** Analysis and Design of Algorithms, Data Structures and Algorithms, Advanced Programming in Java, Operating Systems, Database Management Systems, Statistical Inference, Convex Optimization, Statistical Machine Learning, Machine Learning, Deep Learning, Reinforcement Learning, Artificial Intelligence, Natural Language Processing, Information Retrieval

Experience

- **Google**
  SWE Intern — *May 2024 - Aug 2024*
  - **Project Focus:** Gemini fine-tuning for auto-intent prediction.
  - **Contribution:** Built and refined pipelines to create high-quality multilingual training datasets, then fine-tuned the Large Language models and conducted several quality iterations.
- **Signal Processing and Biomedical Imaging Lab**
  Undergraduate Researcher — *Aug 2023 - May 2024*
  - **Project Focus:** Disease classification of ECG waves using deep learning architectures.
  - **Contribution:** Developed a novel deep learning architecture using a combination of CNN and attention mechanism, resulting in significant performance improvements over state of the art results, also explored **semi-supervised learning** techniques like fix-match & mix-match.
- **Applied Solar Technologies**
  Machine Learning Intern — *May 2023 - Jul 2023*
  - **Project Focus:** Time series forecasting and anomaly detection of solar panel data.
  - **Contribution:** Using deep learning techniques like transformers, LSTM, and RNN, developed models that accurately predicted solar panel performance and detected anomalies.

Projects

- **Detrieval** — Jan 2024 - May 2024
  GPT-3.5, Langchain, Python, Pinecone, ReactJS, RAG, Information Retrieval — *Report, Github*
  - Created a web-copilot Chrome extension enabling multimodal retrieval across multiple open tabs using Pinecone as a vector database and **GPT-3.5** for index retrieval and output generation. Integrated a chatbot interface, **RAG pipeline**, and real-time web scraping to enhance user experience, providing quick and context-sensitive responses.
- **Optimizing Campus Dining** — Aug 2023 - Dec 2023
  Python, TensorFlow, Scikit-Learn, Machine Learning — *Report, Github*
  - Developed and evaluated machine learning models using a handcrafted dataset to forecast meal sales at IIIT Delhi's dining facilities. Emphasized the importance of feature engineering and encoding techniques, particularly one-hot encoding for menu items, to **optimize resource allocation and minimize food wastage** on campus.
- **Replication of Dormant Neuron Phenomenon in Flappy Bird Environment** — Nov 2023 - Dec 2023
  Python, PyTorch, Reinforcement Learning — *Github*
  - Implemented deep Q learning technique to replicate the dormant neuron phenomenon observed in the Flappy Bird environment, **achieving results similar** to those in the original paper.
- **Fruit Freshness Classification** — Mar 2023 - Apr 2023
  Python, Scikit-Learn, TensorFlow, Machine Learning — *Github*

- Developed an ensemble machine learning model using Logistic Regression, Random Forest and NNs to classify fruits with high accuracy. Ranked among the **top four teams** in the Kaggle contest.

- **Tank Wars** Nov 2022 - Dec 2022
  Java, LibGDX, Box2D *Github*
  - Developed a fast moving GUI based clone of the game "Tanks Stars" with customized tanks, weapons and live background in Java using principles of OOPs with the additional functionality of **saving games and loading saved games**.

Certification

- Machine Learning Operations Specialization, DeepLearning.AI *Cerificate Link*

Honors and Awards

- Dean's Award of Academic Excellence 2022, 2023 and 2024 for 9+ CGPA.
- Current **rank 1** in the batch.
- JEE Advanced AIR: **2365** and JEE Main percentile: **99.86**.
- Ranked 173th among 6000+ teams in Amazon ML Challenge '23.

Positions

- **DAC Representative**, Student Senate *May 2023 - Jun 2023*
- **Organiser**, Preparation for Interview Program *Jan 2024 - July 2024*
- **Founding Member and Mentor**, Undergraduate Research Club *Sep 2023 - Present*
- **Events OC**, RIISE *Jan 2024 - Mar 2024*
- **Core Member**, Training and Placement Cell *Apr 2023 - Mar 2024*
- **Batch Representative**, Student Council *Jun 2022 - May 2023*