Nandini Bhalla

Roll No.:22cs2002
Bachelor of Technology
Integrated Dual Degree (CSE, AI Specialization)
Rajiv Gandhi Institute of Petroleum Technology

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech-M.Tech CSE (IDD)	Rajiv Gandhi Institute of Petroleum Technology	9.18	2022-2027
Senior Secondary	CBSE Board	95.2.0%	2022
Secondary	CBSE Board	96.5%	2020

EXPERIENCE

- **ISRO VSSC** *Jan 2025 – Present*
  Machine Learning Remote
  – Developed an anomaly detection model leveraging a transformer-based architecture for multivariate time-series data.
  – Integrated self-conditioning, adversarial training, and meta-learning to enhance stability, robustness, and accuracy.
  – Achieved 17% higher F1 scores and 99% reduced training time compared to existing models.

PROJECTS

- **Post4Planet** *Aug 2024 - Dec 2024*
  SIH 2024 Problem Statement: 1754
  – **Tools & technologies used**: Flutter,OpenCV,AI/ML,Firebase
  – Designed a digital-first strategy to modernize India's postal system, enhancing efficiency and sustainability.
  – Proposed AI-powered tracking, green logistics, and financial service integration, improving accessibility for millions of users.
  – Advocated EV adoption and renewable energy, reducing the carbon footprint by 30% in logistics.

- **CNN-Based Fingerprint Liveliness Detection** *Oct 2024 - Feb 2025*
  To detect fake and spoofed fingerprints which helped in increasing Security
  – **Tools & technologies used**: Tensorflow,OpenCV,CNN
  – Developed a deep learning-based model using CNN to distinguish between live and spoofed fingerprints, enhancing biometric security.
  – Integrated TensorFlow/Keras, image preprocessing (ImageDataGenerator), and trained on the LIV Det 2015 dataset
  – Achieved 85% test accuracy, with an APCER of 0.83 and BPCER of 0.142, improving security against presentation attacks.

KEY COURSES TAKEN

- Data Structure, Algorithms, DBMS, Machine Learning, Artificial Intelligence, Web Services, Operating System, Computer Networks, Computer Graphics, Deep Learning

TECHNICAL SKILLS

- **Programming:** C, Python, HTML5, CSS3, JavaScript, MySQL
- **Data Science:** TensorFlow, PyTorch, CNN, Computer Vision, NLP, LLM, Generative AI
- **Tools & OS:** GitHub, VS Code, Streamlit, Jupyter Notebooks, Docker, Linux, Windows
- **Libraries/Frameworks:** React, Pandas, scikit-learn, TensorFlow, PyTorch
- **Web Skills:** HTML, CSS, JavaScript, ReactJS, NextJS
- **Concepts:** Data Preprocessing, Feature Engineering, Model Optimization

ACHIEVEMENTS

- **Smart India Hackathon Winner** Winner of SIH 2023 & 2024, solving real-world problems with innovative tech solutions.
- **Department Rank 1 in Academics** Maintained the highest department rank in academics from 2022 to present.

POSITIONS OF RESPONSIBILITY

- **Joint Secretary,**Sports Council, RGIPT *Aug 2024 – Present*
- **Tutor for UG 1st Year Students,**RGIPT Tutorship Program *Aug 2024 – Present*