ANAND NAIR

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Education

BS in Computer Science and Mathematics, Minor in Physics
University of Nebraska-Lincoln
- Coursework: Data Structures and Algorithms, Embedded Systems, Quantum Computing, Differential Equations, Computer Organization, Robotics, Computer Systems Engineering, Physics I-III, Discrete Structures, Calculus I-III, Unix Programming, Electrical & Electronic Circuits, Linear Algebra.

Experience

Undergraduate Research, Particle Physics & Cosmic Rays (CROP) Aug 2024 – Present
University of Nebraska-Lincoln
- Studied cosmic ray air showers and high-energy cosmic particles.
- Installed and operated detectors across Nebraska as part of an NSF-funded project; analyzed time-stamped data for cosmic ray coincidences.
- Skills: Data analysis, scientific communication, teamwork.

Founder & CEO, Linagle AI Jun 2025 – Present
Synthetic Medical Data Generation Startup
- Founded Linagle AI, a startup focused on generating high-quality synthetic medical images for research and healthcare applications.
- Designed and implemented deep learning pipelines for synthetic MRI, CT, and X-ray data generation.
- Skills: Generative AI, synthetic data pipelines, entrepreneurship, leadership.

Undergraduate Research Assistant, Yao Labs Nov 2023 – May 2024
School of Computing, UNL
- Collected and analyzed Reddit health data using API integration.
- Retrieved, cleaned, and processed data to study public health sentiment.
- Skills: API integration, data analysis, NLP, Python, Pandas.

Publications

- A Modular Feedback Framework for Escaping Barren Plateaus in Variational Quantum Algorithms (ICQIST, 2025)

Projects

Brain Tumor Detection from MRI Images
- Built a CNN with TensorFlow/Keras to detect brain tumors from MRI scans.
- Preprocessed images, applied data augmentation, and achieved strong accuracy.
- Skills: Deep learning, medical image analysis, Python, TensorFlow.

Song Lyrics Generator with LSTM
- Developed an LSTM-based model to generate lyrics from a multi-genre dataset.
- Tokenized text, generated sequences, and trained model for natural language generation.
- Skills: NLP, LSTM, TensorFlow, Python.

AI Research Agent Web App
- Built a web-based AI research assistant using HTML, TailwindCSS, and JavaScript.
- Integrated Google Gemini API for real-time data retrieval and source citations.
- Skills: Web development, API integration, JavaScript.

Fraud Detection Using Graph Neural Networks

- Built a GNN to detect fraudulent credit card transactions using graph-based feature engineering.
- Constructed transaction graphs, trained GNN models, and evaluated with metrics.
- Skills: GNNs, PyTorch, NetworkX, Python.

CNN for CIFAR-10 Image Classification

- Designed and trained a CNN to classify CIFAR-10 dataset images with 72% accuracy.
- Implemented convolution, pooling, and dense layers with performance visualization.
- Skills: CNN, TensorFlow, Python, NumPy, Matplotlib.

Galaxy Evolution Study Using JWST Data

- Analyzed galaxy data from JWST to study morphology, star formation, and redshift evolution.
- Skills: Astrophysics research, Python (Astropy), data analysis.

Mini Drone-Based Surveillance System

- Designed a conceptual framework for drone navigation, obstacle detection, and data collection.
- Skills: Drone system design, sensor integration, documentation.

Coin Picking Robot

- Designed autonomous and remote controls for a robot using STM32, EFM8, and Xbox controller.
- Implemented nRF24L01 transceivers for communication and autonomous movement logic.

Certifications & Training

- IBM Professional Machine Learning Engineer
- AI on NVIDIA Jetson Nano Certification
- Quantum Fundamentals and Computing – Q-CTRL
- Oracle Cloud AI Professional Certification (In Progress)

Honors and Awards

- Appreciation from NASA for Galaxy Collision project proposal.
- Gold Medal from Indian Vice President M. Venkaiah Naidu for Bigilla robo-drone system.
- Winner, Science Quiz Competition by Manorama magazine.
- Adi Shankara Young Scientist Award (2019).
- State-Level Champion, BigQ Challenge (2019).
- Global Laureate Scholarship, Emerging Leaders Scholarship.

Technologies

Languages: C++, C, Java, Python, HTML, CSS, Qiskit

Frameworks/Tools: TensorFlow,langChain, keras, Oracle Cloud, openCV, PyTorch, pandas, Matplotlib, Seaborn, NumPy, Astropy, GitHub, APIs, Microsoft SQL, scientific hardware integration (scintillation counters, GPS systems)