

Nishanth Gopinath

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SUMMARY

Motivated Computer Science graduate specialising in Data Science with practical experience in web development, machine learning, and predictive modelling. Skilled in creating user-centric digital tools and performing data-driven analyses. Known for leadership in technical projects and hackathons, with a passion for impactful AI solutions.

SKILLS

Programming Languages: Python, C/C++, Javascript, HTML, CSS, Next

Framework: PyTorch, TensorFlow, Keras, OpenCV, Scikit-Learn, PowerBI, SQL, VSCode, Streamlit, Docker, Flask, Android Studio, Gradio, Scikit-learn, Transformer, Natural Language Processing, N8N, Visily

EDUCATION

Masters in computer science - Data Science

Trinity College Dublin • Dublin, Ireland • September 2024 - September 2025

Bachelor of Technology in Artificial Intelligence and Machine Learning

Rajalakshmi Engineering College Chennai • India • 2020-2024

EXPERIENCE

Software Developer Intern

KittyKat

August 2025 - October 2025, Singapore (Remote)

- Developed an internal collaboration platform to streamline communication between company workers and clients, and built automated pipelines for the main company site to improve operational efficiency and workflow automation, while conducting testing, bug fixes, and participating in technical reviews.

Web Developer & Data Analyst

Plumb5

January 2023 - April 2023, Bangalore, India

- Analysed customer data platforms (CDP) to assess and compare features, scalability, and integration capabilities, aiding strategic decision-making.
- Developed data-driven insights to optimise Plumb5's email editor functionality and improve user engagement.
- Integrated advanced analytics components like ChatGPT, to enhance data interaction and reporting features.

DISSERTATION

Personalized Secure Slimmable Quantum Federated Learning

- Developed Personalized Secure Slimmable Quantum Federated Learning (PSSQFL) framework integrating bandwidth-adaptive quantum neural networks with Quantum Key Distribution for privacy-preserving collaborative machine learning on distributed healthcare datasets
- Implemented and validated slimmable QNN architecture on clinical prediction tasks (heart disease, breast cancer), demonstrating superior convergence, personalization, and robustness compared to classical federated learning baselines using Python, PennyLane, TensorFlow, and PyTorch

PROJECT

Distributed Traffic Booking Platform - Scalable Global System

- Designed and implemented a globally accessible traffic booking platform capable of handling millions of users with high reliability, low latency, and strong consistency guarantees.
- Architected a distributed system using CockroachDB (transactional, fault-tolerant DB), and Redis (caching layer) to ensure scalability and fault tolerance.
- Focused on performance optimization, horizontal scalability, and real-world fault recovery scenarios in deployment.
- Integrated event-driven notifications and ensured atomic transactions to prevent double bookings and ensure data integrity.

Astro Leo - Peer-to-Peer Networking Protocol for LEO Satellites

- Designed and implemented a decentralized networking protocol enabling synchronized imaging, inter-satellite communication, and data sharing in Low Earth Orbit satellite networks.
- Integrated encryption protocols, time synchronization, and dynamic routing algorithms to ensure secure and scalable communication across satellites in a distributed system.
- Developed a framework for real-time image transmission, failure recovery, and AI-assisted data aggregation, supporting high-resolution imaging of celestial objects.

Visionary AI - Text to video narrative using GenAI

- Engineered 'Visionary AI,' a platform that automates the conversion of text into video content, streamlining the video creation process.
- Enabled easy creation of educational videos with synchronised visuals and audio, enhancing accessibility for students and educators.
- Optimized video quality and processing efficiency by integrating advanced AI components, providing a more engaging learning experience.

AWARDS & HONORS

Best Paper Award & Publication

- Best Paper Presenter Award International Conference for Phoenixes on Emerging Current Trends in Engineering and Management conducted by Panimalar Engineering College, Chennai.
- Paper published on topic Fetus health prediction using CNN on topic AI in healthcare.
- <https://doi.org/10.1063/5.0254700>