

Nalin Agarwal

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BACKGROUND

A highly motivated graduate student who is primarily interested in Robotics, Robot and Reinforcement Learning, Artificial Intelligence and interdisciplinary fields like Neuroscience and AR/VR/Graphics technologies. My qualities include self-learning, clean communication skills, adaptability and ability to perform in a team.

EDUCATION

The University of Edinburgh

Edinburgh, Scotland, UK

M.Sc. in Artificial Intelligence; GPA: -

Sept 2025 – Present

Specializing in Robotics and RL, including the master's dissertation;

Relevant coursework: Advanced Robotics, Robot and Reinforcement Learning, Probabilistic Modeling and Reasoning, Advanced topics in Machine Learning, Computational Neuroscience, Computational Cognitive Neuroscience, Introduction to Quantum Computing

Delhi Technological University

New Delhi, India

B.Tech. in Engineering Physics; GPA: 9.18

Dec 2020 – May 2024

Major in Electronics and Communications Engineering, Minor in Computer Science Engineering;

Relevant coursework: Fundamental Physics, Mathematics, MATLAB Applied Physics, Quantum Physics, Cosmology and Astrophysics, Electronics, Semiconductors, Optical Fibres, Microwave, Atmospheric Sciences, Data Structures and Algorithms, Database Systems, Operating Systems, Computer Networks, Computer Graphics

Sri Venkateshwar International School (High School, CBSE)

New Delhi, India

10th AISSE : 97.8%, 12th AISSCE: 94.2%

2007 – 2020

SKILLS

Technical: C/C++, Python, Pinocchio, Git, MATLAB, HTML, CSS, JavaScript, SQL, Linux, Flask, Jinja, Godot, LaTeX, Adobe Creative Suite, Silvaco TCAD, PennyLane

Practical: Visual Design, Data Analysis, Data Visualization, Marketing, Logo Design, Poster Design, Leadership and training, Creativity, Management

RESEARCH EXPERIENCE

Centre for Development of Advanced Computing (C-DAC)

Pune, India

Research Assistant

Nov 2024 – March 2025, Full-time

- Working in the field of Quantum Computing with specific focus on Quantum Artificial Intelligence and QML algorithms.
- Briefly studied various Quantum Machine Learning Algorithms for optimization techniques like Quantum Approximate Optimization Algorithm (QAOA) and Variational Quantum Eigensolver (VQE), and their different range of applications in recent R&D developments.
- Learned the programming techniques for IBM Quantum Qiskit Kit and currently working on Hybrid Quantum Convolutional Neural Networks, specifically for image-based recognition and detection of Wildfires in forest areas.

Indian Institute of Technology, Delhi (IIT-D)

New Delhi, India

Research Fellowship

Feb 2024 – Oct 2024, Part-Time

- Worked at the Centre for Atmospheric Sciences (CAS) department at IIT-Delhi under the supervision of [Dr. Samiran Mandal](#) on the project "Computational Analysis of oceanic events across the Seychelles-Chagos Thermocline Ridge region in the Southern Indian Ocean"
- Data Analysis using Python programming language to find heatwave hotspots
- Physical analysis of various metrics and correlation with IOD/ENSO events, sea surface height, chlorophyll anomaly across the specific region using mathematical tools, and computing the data to draw comparisons and conclusions.

Space Applications Centre, ISRO

Ahmedabad, India

Research Assistant

May 2022 – Jul 2022 ; Jun 2023 - Aug 2023, Full-time

- Worked on "Analysis of Marine Heatwaves Using Satellite Data" under the supervision of [Dr. Rashmi Sharma](#) and [Dr. Nitant Dube](#).
- Data Analysis of satellite data using Python programming language
- Development of a tool to detect Marine Heatwaves over the globe on real-time satellite data over the past 40 years. Analyzed various Marine Heatwaves metrics using python plots and studied correlation of cyclones and marine heatwaves in the Indian subcontinent ocean in detail.

Delhi Technological University

Undergraduate Researcher

New Delhi, India

Aug 2023 – May 2024, Part-Time

- Worked on my undergraduate thesis project in the field of Semiconductor Electronics incorporating device/circuit design and simulations using Silvaco TCAD software and ATLAS language.
- Studied different possible structural and material changes to the dual gate MOSFET to incorporate charge trapping capabilities.
- Published an article about my research findings in an IEEE conference as well.

PROJECTS

Cricket Scorecard Database Management System

Designed using C++ language. A DBMS to store different cricket scorecards and information, access them whenever you want. Just like cricbuzz app, where you can add your own scorecards, access the saved ones at any time, and make changes to them.

Gamer's Paradise

A user-friendly web application designed to streamline the organization of your gaming experience. Developed using HTML, CSS, Flask, and SQL technologies, this application enables users to add, delete or search about games to make their personalized gaming playlists.

PUBLICATIONS AND CERTIFICATIONS

ICITEICS-2024, Vemana Institute of Technology - Koramangala, Bengaluru

July 2024

Topic : A Novel Dielectric modulated Double Gate Charge-Trapping MOSFET: Ferroelectric Gate Stack and Gaussian Doped Substrate Integration for Enhanced Performance

Certificate : [Link](#)

DOI: 10.1109/ICITEICS61368.2024.10625402

Published By: IEEE

TROPMET-2022, Indian Institute of Science Education and Research Bhopal

Dec 2022

Topic : "On Rapid Increase In The MHW Intensity During Last Decade (2010-Present)

Using Satellite Observations: Implications on Cyclone Activity in the Arabian Sea?"

Certificate : [Link](#)

CS50X, Harvard University

Nov 2023

Certificate: [Link](#)

VOLUNTEERING WORK

Edumonics Pvt. Ltd., New Delhi, India

Jun 2021 – Oct 2021

Content Researcher

Research content and corrections, Blogposts, designed landing pages for the website, digital marketing along with SEO techniques to boost up the reach.

Certificate: [Link](#)

Muskurahat Foundation, NGO, India

May 2023 – Aug 2023

Fundraising Volunteer

Raised funds of 8000 Indian Rupees, learnt how NGO's function, their causes and the situation of children in our country, how to approach people for fundraising, awareness drives

Certificate: [Link](#)

AWARDS & ACHIEVEMENTS

School Topper in Class X Board Examinations

Academic Head Boy of my school in class XII

Part of the **Table Tennis team** for my department (Applied Physics) in the annual sports fest

Presented my research paper at the conference **TROPMET-2022 at IISER-Bhopal**.

Participated in **MIMAMSA - Science quiz competition** in my second year. **Top-20** nationwide in a **XR-tech based hackathon**.

Top-10 in **Startup Weekend** organised by E-Cell.