

EDUCATION

B.Tech in Artificial Intelligence and Machine Learning

University School of Automation and Robotics

CGPA: 8.7

Class XII & X

Percentage: 94% (XII), 92% (X)

Guru Gobind Singh Indraprastha University, Delhi

Mount St Mary's School, Delhi

PROFESSIONAL EXPERIENCE

Full Stack Web Developer

Quamin Tech Solutions LLP

- Developed and maintained web applications using the MERN stack.
- Integrated chatbot and market analyzer into the farmer dashboard.

Vocational Trainee

Sasan Power Plant Ltd. (Reliance)

- Implemented grid frequency prediction achieving 80% accuracy.
- Conducted exploratory data analysis on power generation data.

IBM SkillsBuild Intern

IBM SkillsBuild Internship Programme

- Developed a Generative AI model using the IBM GenAI platform.

Web Developer Intern

Dant Villa Dental Clinic

- Designed and developed a user-friendly website with contact features.

ACM, USAR – Frontend Web Developer

2024–Present

- Created and maintained the official ACM USAR website.

PROJECTS

Diabetic Retinopathy Detection (Ongoing)

[Project Link](#)

- Pre-processed retinal fundus images and developed a multi-class classification pipeline for Diabetic Retinopathy detection using various deep learning architectures including InceptionV3, EfficientNetV2B0, ResNet18/34/151, ConvNext Small, and a custom CNN model. Achieved up to 91% classification accuracy across 5 severity classes.

Vigyaan

[Project Link](#)

- Created an end-to-end machine learning platform that enables users to upload datasets, perform exploratory data analysis (EDA), build classification/regression models, and visualize performance metrics through an interactive web interface.

Grid Frequency Prediction

[Project Link](#)

- Developed a time series forecasting pipeline using LSTM and ARIMA to predict grid frequency based on historical power grid data over a 3-year period, aiding power companies in balancing supply-demand operations.

Electricity Power Demand Prediction

[Project Link](#)

- Built a hybrid prediction system for real-time electricity demand forecasting using LSTM, Echo State Networks (ESN), ARIMA, and ensemble regression models. Optimized model to achieve Mean Squared Error within 2% margin.

Facial Expression Detection

[Project Link](#)

- Built a facial expression classifier using traditional machine learning models like Decision Trees and Random Forests. Achieved up to 89.8% accuracy in recognizing seven emotional states using facial landmarks.

Korero

[Project Link](#)

- Developed a real-time Indian Sign Language recognition system using OpenCV for hand gesture tracking and a CNN model for classification. Output is converted to text and synthesized into speech to aid communication for hearing-impaired users.

DineDash

[Project Link](#)

- Designed and deployed a full-stack online food ordering platform using the MERN stack. Integrated Stripe for secure payment processing and implemented dynamic routing for menu, cart, and order history management.

TECHNICAL SKILLS

- | | |
|--|--|
| <ul style="list-style-type: none">Programming: Python, JavaScript, C, GoWeb Dev: MERN Stack, React, Node.js, HTML/CSS, REST APIsML/DL: CNNs, LSTMs, ARIMA, ESNs, DQN, YOLO, Reinforcement Learning, Decision Trees, Regression, Time Series | <ul style="list-style-type: none">Forecasting, EDATools: TensorFlow, PyTorch, OpenCV, Stripe, Git, Oracle Cloud, Jupyter, Google ColabOther: UI/UX Design, Cybersecurity, Cloud Computing, Model Deployment, Sign Language Recognition |
|--|--|

CERTIFICATIONS

- Cyber Security and Ethical Hacking, MSME
- Artificial Intelligence with Machine Learning, Pregrad
- Time Series Analysis, Udemy
- Full Stack Web Development, Udemy

HONOURS

- Brij Gala Goel Award for Topper in Mathematics
- 3rd Position, SRM Hackathon
- Top 9, Great Bengaluru Hackathon
- Top 30, Smart India Hackathon, 2023 (Team Leader)
- Top 30, Smart India Hackathon, 2024
- Top 5, The Annual Flagship Hackathon, SGGSCC, 2024

PUBLICATIONS

- **Rethinking Reasoning: A Critical Look at Large Reasoning Models**

Medium, Jun 14, 2025

Authored Rethinking Reasoning: A Critical Look at Large Reasoning Models, analyzing the limitations of current benchmarks used to evaluate reasoning in AI systems. The article critiques popular Large Reasoning Models (LRMs), highlighting inefficiencies like overthinking and premature collapse on complex tasks, and advocates for alternative evaluation methods using structured puzzle environments to better assess true reasoning and generalization.

- **Empowering Local Grocers in the Instant-Delivery Era**

Medium, Jun 3, 2025

Proposed a hyperlocal retail integration model in Empowering Local Grocers in the Instant-Delivery Era, exploring how local grocery stores can partner with instant delivery platforms to become micro-warehouses. The article analyzes the impact of e-commerce on neighborhood shops, presents a scalable solution to preserve local commerce, and discusses real-world challenges in algorithmic order allocation.

- **The AI Race: A Reflection of the Nuclear Arms Race?**

Medium, Feb 4, 2025

Explored the parallels between the AI arms race and the Cold War-era nuclear arms race, highlighting the risks of unregulated AI development. The article analyzed advancements like Deepseek R-1 and OpenAI's dominance, emphasizing the urgent need for global cooperation, regulation, and ethical oversight to prevent the misuse of Super AI.