

Nehal Khan

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EDUCATION

- B.Tech., Amrita Vishwa Vidyapeetham, Chennai** ⓘ 09/2022 – Present
Computer Science and Engineering with a current CGPA of 8.97.
- Higher Secondary, Notre Dame of Holy Cross School, Salem** ⓘ 06/2020 – 06/2022
Maths Computer science group with a percentage of 86%.

PROJECTS

- AEyeD - Artificial Eye Decipher,** ⓘ 02/2025 – Present
Using Python, OpenCV, TensorFlow, Tesseract ⓘ
- Designed an affordable, AI-powered real-time monitoring system for Face and Gesture Recognition, Vehicle and Stairs Detection, and Text Recognition to enhance safety in restricted areas.
 - Conducted real-world validation across 50+ test scenarios, with a >88% success rate in overall performance.
 - Optimized system efficiency by replacing image storage with vector embeddings in a database.
- Fabrication Avoidance using Authentication and Encryption,** ⓘ 01/2025 – 02/2025
Using Python, Flask, MySQL, AES, RSA, SHA-256 ⓘ
- Built a secure client-server audio transfer system using hybrid cryptography (AES + RSA), ensuring data integrity and authentication.
 - Implemented end-to-end encryption, digital signature verification, and access control, reducing file spoofing risk by over 90% in simulated attack scenarios.
- Upgrade - Recommender System,** ⓘ 10/2024 – 12/2024
Using Python, Flask, MongoDB, Azure Cosmos DB ⓘ
- Developed an ML-KNN-based personalized recommender system to enhance students' learning experiences.
 - Offered recommendations with 90% accuracy on 20K test records, delivering course-specific learning strategies from 5K+ possible combinations to enhance student outcomes.

PUBLICATIONS

- Enhancing Accessibility and Autonomy for Visually Impaired** ⓘ 06/2025
Individuals Using AEyeD: An Assistive System, IEEE ⓘ
DOI: 10.1109/ICITIIT64777.2025.11040814

SKILLS

Programming Languages: Python, C, Java
Web Development: HTML5, CSS3, JavaScript, Node.js, React.js, MySQL
Machine Learning: NumPy, Pandas, TensorFlow, OpenCV
Tools & Frameworks: Git, GitHub, Postman, Flask
Cloud Platform & Databases: Microsoft Azure, MySQL Workbench, MongoDB Compass
UI/UX Design: Figma, Canva
Soft Skills: Team Management, Public Speaking, Critical Thinking, Group Discussion

POSITION

- Club Lead, Cognizance Amrita** ⓘ 08/2024 – Present
- Organized major tech events, including Green Hackathon 2024 (focused on sustainability innovation) and Delta 2025 tech-fest, which engaged 90+ student participants in technology-based problem solving.
 - Guided 30+ juniors in weekly coding tasks and open-source work, helping build a strong tech community.

AWARDS

- Best Paper Award, ICITIIT'25 IIIT Kottayam** ⓘ 02/2025
Received under the "Explainable and Responsible AI Solutions for Interdisciplinary Applications" track.
- 3rd place - PALM LLM Website building, Tantrotsav'24** ⓘ 02/2024
Developed a chatbot to assist in website development.
- Azure AI fundamentals, Microsoft Azure services** ⓘ 04/2023
Explored the fundamentals of Azure AI and NLP.