Nehal Khan

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EDUCATION

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

PROJECTS

AEyeD - Artificial Eye Decipher,

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,

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,

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 Individuals Using AEyeD: An Assistive System, IEEE DOI: 10.1109/ICITIIT64777.2025.11040814

SKILLS

Programming Languages: Python, C, Java, HTML5, CSS3, JavaScript, SQL Machine Learning: NumPy, Pandas, TensorFlow, OpenCV Tools and Frameworks: Git, Github, Flask Cloud Platform and 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 @

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

01/2025 - 02/2025

10/2024 - 12/2024

02/2025 - Present

06/2025

08/2024 - Present