

# MOHANRAJ VENKATESAN

Phone: 9080906985 - Email: ch.en.u4cys22033@ch.students.amrita.edu

LinkedIn: <https://www.linkedin.com/in/mohanraj-venkatesan-40a3b61ba/>

---

## EDUCATION & CERTIFICATIONS

**Computer Science(Cybersecurity) (2022-2026)**

**CGPA - 7.64**

Amrita Vishwa Vidyapeetham - Chennai

---

## PROJECTS

**1) DDoS Defense System** Created a system to detect and mitigate DDoS attacks using Machine Learning.

- Built a DDoS defense system using machine learning, achieved 95% accuracy in real-time attack prediction.
- Developed blockchain-based logging for tamper-proof records and faster responses.

**2) Gesture-to-Text/Voice Communication System for Disabled Individuals. (In-progress)**

Objective: Developing a novel communication system/app that translates gestures into text and voice for seamless phone communication between disabled individuals and others using phone calls.

Technologies Used: Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Long Short-Term Memory (LSTM) networks.

**3) Parivartana- Sustainability App Developed campus resource-sharing app using Flutter and Firebase.**

- Built a peer-to-peer marketplace using Flutter and Firebase, improving campus resource utilization by 30%
- Integrated AI-based image detection and auto-scaling via Firebase, efficiently handling traffic spikes.
- Developed a carpooling feature that reduced campus congestion by 25%
- Created an academic collaboration tool for 300+ students using Flutter and Firebase

**4) Hospital Management App | Data Privacy with K-Anonymity**

- Used K anonymity to develop a hospital management system using Java to secure sensitive data.

**5) Deepfake Detection Model:** Technologies used: Python, TensorFlow Achieved an increase in training accuracy from 82.71% to 94.21% over 100 epochs. Reached a validation accuracy peak of 94.29%. Training loss decreased from 0.3784 to 0.1484, while validation loss reduced from 0.4655 to 0.1794. Demonstrated effective detection of real vs. deepfake images with minimal overfitting.

---

## EXPERIENCE

Software Developer Intern - Prodigy Infotech

**May 2024 to June 2024**

- Designed and optimized high-performance applications using C++ and Java.
  - Developed and tested scalable backend systems for handling large-scale data transactions.
  - Improved database query performance using indexing and query optimization techniques.
  - Conducted unit testing and debugging to enhance application reliability.
  - Integrated RESTful APIs for seamless communication between client and server modules.
- 

## ACHIEVEMENTS

>> **Winner (1st place) Sustainability Hackathon IIT Madras - Parivartana**

>> **Winner (1st Place) of 36-hour Cryptoshield Hackathon** – Blockchain-ML based DDOS attack prevention for cloud applications.

>> **Winner (1st Place) of Green Hackathon** – Parivartana, an app that aims to drive small, impactful actions that collectively create positive change, fostering a greener future.

>> Finalist in the LevUP Ideathon.

>> Participated in IITM's Shaastra Encryption Hackathon.

>> Participated in Google's Generative AI Hackathon Roadshow.

>> Solved 200+ problems in Leetcode.

## CONTRIBUTIONS

- >> **Infer (Meta Open Source):** Contributed to Meta's well-known static analysis tool for Java, C++, Objective-C, and C.
  - >> **RoomGPT (Open-Source ML Project):** Added a new feature to an AI-powered room recognition tool.
  - >> **Beginner-Friendly OSS Guide:** Improved documentation and contribution workflow for a well-recognized open-source onboarding project.
  - >> **Game Development Club (AMIGOS):** Organized a national-level 3D modeling competition using Blender.
- 

## TRAINING

- >> **Cybersecurity Fundamentals:**
    - Completed a course on OWASP & Security Testing.
    - ISC2 Certification
  - >> **Cloud/Databases:** MongoDB (used for non-relational database management), Firebase (used for backend as a service), MySQL (used for relational database management)
  - >> **Relevant Coursework:** Data Structures & Algorithms (implemented using C++), Operating Systems (Linux-based practice), Object-Oriented Programming (C++ and Python), Cryptography (studied encryption methods like AES and RSA).
  - >> **Areas of Interest:** Software Development, Cloud Security
- 

## SKILLS

- |          |                    |                 |
|----------|--------------------|-----------------|
| • C/C++  | • Git, GitHub      | • Agile, Scrum  |
| • Python | • Flutter/Dart     | • Secure Coding |
| • Java   | • Machine learning | • SQL           |
- 

## COMMUNITY SERVICE

- >> Actively contributed to Sevanavaram, led initiatives to raise awareness on reducing plastic usage.
  - >> Rotary club secretary in school
- 

## Soft Skills

- Strong analytical and problem-solving skills.
  - Excellent communication skills, interpersonal abilities and collaborate with people easily.
  - Ability to work in fast-paced, dynamic environments.
  - High attention to detail and time management.
  - Commitment to collaborative problem-solving and quality assurance.
  - Writing and staying updated on industry trends.
-