

Raj Koyani

📞 7048833160 — ✉ raj.koyani23@gmail.com — 🌐 Raj Koyani — 🔄 Raj-Koyani — Portfolio

EDUCATION

VIT, Vellore Institute of Technology
M.Tech Integrated - Software Engineering
CGPA: 8.50

2021 – 2026
Chennai, Tamil Nadu

Swastik School
12th Grade - Science Stream - **Percentage: 81.53%**

2019 – 2021
Completed in 2021

Nachiketa Schooling System
10th Grade - **Percentage: 83.5%**

2016 – 2019
Completed in 2019

Skills & Coursework

- **Languages:** C/C++, JavaScript, PHP, Java, Python
- **Web Development:** HTML, CSS
- **Software Engineering:** SDLC, DBMS, Object-Oriented Design, AI-ML.
- **Tools:** Cisco Packet Tracer, MATLAB, Selenium, Jira, Katolin, Node-red, Power BI
- **Office Tools:** MS Office, WPS Office, LibreOffice
- **Game Development:** Unity Studio, 3D Modeling, Game Design

Certifications

- **VIT Chennai - Centre for Cyber Physical Systems (CCPS):** Summer Research Intern (June – July 2024)
- **Wells Fargo:** Software Engineering Job Simulation
- **Agile Scrum Course:** Infosys Agile Course
- **AWS Solution Architect:** AWS Solution Architect Job Simulation
- **NPTEL:** E-business

Experience

National Service Scheme (NSS) - VIT
Head of Influencer Committee

2021 – 2023

- Actively contributed to NSS for 2 years, organizing and managing various events.
- Achieved the position of Head of Influencer Committee.
- Managed and expanded the social media presence, particularly on Instagram.
- Instagram Appreciation: **NSS Instagram Post.**

Techextensor Pvt. Ltd.
Web Development Intern

1 Month - 2024
Ahmedabad, Gujarat

- Worked as a trainee web developer at Techextensor for 1 month.
- Gained experience in web development technologies and collaborated on real-world projects.

VIT Chennai - Centre for Cyber Physical Systems (CCPS)
Summer Research Intern

June – July 2024
Chennai, Tamil Nadu

- Completed a 6-week internship focused on designing an IoT Level-5 Smart Lock System.
- Integrated biometric authentication and emergency auto-unlocking features.
- Connected system to cloud for remote monitoring, data logging, and real-time entry tracking.
- Developed a fail-safe mechanism for emergencies and enhanced system security through IoT.

Projects

An Automated Glove Apparatus Conformable to a Hand of User (ComAlert)

2023

- **Patent Filed:** Patent Number 202341078709.
- Wearable glove designed for coma patients, equipped with microcontrollers, sensors, and communication modules.
- Detects finger movements and sends real-time alerts via a connected mobile app.
- Supports live video feed access and improves caregiver response through smart monitoring.
- **GitHub Repository:** An Automated Glove Apparatus.

Smart Lock System with Emergency Auto-Unlocking Feature (IoT Level-5 Project)

2024

- Engineered a smart door lock system integrated with a Firebase-connected Android application for remote access and control.
- Designed an emergency auto-unlock mechanism that activates seconds when high smoke, temperature, or abnormal pressure is detected.
- Biometric authentication handled via mobile application, paired with an Arduino-controlled solenoid lock to ensure secure access.
- Real-time alerts and status updates transmitted instantly to the Android app during emergency events.
- Implemented real-time monitoring, data logging, and cloud-based control using IoT principles.
- Ensured high reliability and rapid response through fail-safe design and secure Bluetooth communication.

Deep Learning Model for Eye Disease Prediction

2024

- Developed a deep learning-based model for predicting and classifying eye diseases such as Normal, Cataract, Diabetic Retinopathy, and Glaucoma.
- Leveraged transfer learning models like Inception V3 and VGG19 for advanced image classification.
- Included features such as data preprocessing and an interpretability module to aid in model transparency.
- Designed to improve early diagnosis, reduce healthcare costs, and increase accessibility to advanced diagnostic tools.
- **GitHub Repository:** Eye Disease Detection.

MEDIBOT – AI-Based Health Chatbot

December 2024

- Developed a Generative AI-powered chatbot to serve as a daily healthcare companion, offering medication reminders, symptom analysis, disease causes, and preliminary disease detection.
- Built using Python and NLP libraries (spaCy, NLTK), with RESTful APIs and database integrations for high scalability and responsiveness.
- Achieved 92% accuracy in processing user queries through intent-based NLP backend.
- Delivered personalized health recommendations, improving user engagement metrics by 30%.
- **GitHub Repository:** MEDIBOT – Health Chatbot.

GYM Country

2023

- Web-based gym management platform using HTML, CSS, JavaScript, and PHP.
- Allows users to manage personalized workout routines securely.
- Backend developed with PHP for data storage and interaction.
- **GitHub Repository:** GYM Country.