Nikhil Sambarapu

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EDUCATION

CMR College of Engineering and Technology — Hyderabad, Telangana
Bachelor of Technology in Computer Science and Engineering (AI & ML) — *Nov 2022 – May 2026*
- Cumulative GPA: **8.92/10.0**
- Relevant Coursework: Data Structures, Algorithms, Machine Learning, Deep Learning, Operating Systems, Computer Networks,DBMS, OOPS

Telangana Social Welfare Residential Junior College — Rajapeta, Telangana
Intermediate (MPC) — *June 2020 – May 2022*
- Percentage: **98.0/100.0**

PROJECTS

SecureAuth Pro (MERN Stack) — MongoDB, Express.js, React.js, Node.js, JWT, Bcrypt, NodeMailer

- Built a secure and scalable MERN stack authentication system with **JWT**, and **HTTP-only cookie** sessions.
- Implemented advanced security features including **Bcrypt password hashing**, **CORS protection**, and **email verification** via NodeMailer and SMTP.
- Developed a responsive **React.js frontend** with **protected routes** and efficient state management using **Context API**.

Brain Tumor Image Segmentation — TensorFlow, Keras, OpenCV, NumPy, Matplotlib

- Built a deep learning model using **3D CNN and U-Net** to detect and segment brain tumors from MRI scans.
- Achieved **95% accuracy** on the BraTS-19 dataset for classifying tumor presence.
- Enhanced segmentation precision and reduced processing time with optimized OpenCV-based preprocessing.

BeFit Buddy – Fitness Web Application — React, TailwindCSS, Clerk, Framer Motion, Vite

- Built a responsive fitness app with personalized workout plans using a custom generator and exercise database.
- Designed animated UI with **Framer Motion** and **TailwindCSS** for smooth cross-device experience.
- Implemented secure user auth, profile management, and workout history tracking with **Clerk**.

TECHNICAL SKILLS

Programming Languages: C++, Python, C

Web Development Technologies: HTML, CSS, Bootstrap, Tailwind CSS, JavaScript, React.js,Node.js,Express.js

Version Control: Git, GitHub

Databases: MongoDB,MySQL

ACHIEVEMENTS

- **HackSavvy-24 National Hackathon** – Developed *Anti Lappy Burglar* and stood in the **Top 10** among **130+ teams** at Mahatma Gandhi Institute of Technology, Hyderabad.

- **Codestorm 36-Hour National Hackathon** – Secured **15th place** among **150+ teams** at Narasimhareddy Engineering College, Secunderabad.

- **Competitive Programming** – Solved around **400+ DSA problems** on various coding platforms like LeetCode, GeeksforGeeks, and CodeChef.

CERTIFICATIONS

IBM Z Datathon – Participated in IBM's global datathon event.

Google AI/ML Virtual Internship – Google and AICTE Eduskills.