HARSIDA K

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Education

Coimbatore Institute of Technology, B.E Computer Science and Engineering *Oct 2022 – May 2026*
- CGPA: 9.08*

Green Garden Matriculation Higher Secondary School, Higher Secondary *June 2021 – Apr 2022*
- Percentage: 98.2

Technical Skills

Languages: Python, C++, C, SQLPlus
Tools: Git, Github, VS Code, Figma
Platform: Windows, Linux

Experience

Winter Intern - Cyber Security, Placement Cell, CIT *Jan 2025*
- Performed penetration testing and vulnerability assessments on simulated and real-world networks.
- Utilized tools such as Burp Suite for web application testing, Wireshark for network traffic analysis, and Nmap for network mapping and port scanning.

Software Engineer Intern, Trivecta Digital Solutions Private Limited, Chennai *July 2024*
Project: Swiwatt Energy Solutions Website
- Developed and deployed the Swiwatt Energy Solutions website, a responsive platform showcasing the company's solar and energy solutions.
- Designed website layouts, integrated key functionalities, and ensured smooth performance for both frontend and backend systems.
- Utilized HTML, CSS, JavaScript for frontend development and Express.js with SQLite for backend implementation.

Certifications

Programming for everybody (Getting started with Python) – University of Michigan, *Coursera* *Aug 2023*
C for everyone: Programming fundamentals – University of California, *Coursera* *Aug 2023*
Ethical Hacking – *NPTEL* *Nov 2024*

Projects

Real-Time Bimodal Transcription: Lip Reading with Audio Cross-Verification *Present*
- Designed a dual-modality speech recognition system integrating lip reading (3D CNN + LSTM) with audio transcription (Whisper) to improve accuracy in noisy or low-audio environments.
- Utilize OpenCV for video capture, PyAudio for audio processing, and apply real-time synchronization using threading and buffering.
- Implement output merging and cross-verification using `difflib` to ensure reliable transcription when one modality fails.
- Tech Stack: Python, OpenCV, PyAudio, PyTorch, Whisper, Streamlit

IoT - Based Smart Farming: Real - Time Monitoring and Analysis for Optimized Spinach Cultivation | *Link* *June 2025*
- Developed a smart farming system using DHT11, soil moisture, NPK sensors, ESP8266, and Raspberry Pi 4 for real-time monitoring via RS485 and ThingSpeak.
- Implemented a Random Forest model in Python to predict spinach growth from environmental data.
- Built a web dashboard (HTML, CSS, JavaScript) to display growth predictions and optimize irrigation and fertilization decisions.
- Tech Stack: Python, XGBoost, Flask, Google Colab, HTML, CSS, JavaScript

Extracurricular Activities

- **National Level Hackathons:** Participated in *SensAI by Hyperverge* and *Innovision* by CIT.
- **National Service Scheme (NSS):** Volunteered for 2 years in community service and campus drives.
- **Quiz Club:** Led the club as Managing Director for 1 year, organizing quiz events and guiding the team.
- **Cryptera 2K25:** Technical Events Head, **CIT**, managed, conducted, and proctored technical events.