Sowdepally Mohana Vamsi

Tirupati, Andhra Pradesh | smohanvamsi9@gmail.com | +91 77804 63554 | **LinkedIn** | **GitHub**

EDUCATION

Amrita Vishwa Vidyapeetham   **Coimbatore, Tamil Nadu**

B.Tech in Computer Science Engineering   *Expected Graduation: May 2026*

- **Specialization:** Cybersecurity
- **Current CGPA:** 8.73/10.0
- **Related Coursework:** Data Structures and algorithms, Object Oriented Programming, Algorithm Design and Analysis, Secure Coding, Database Management System, Cryptography, UI Design, Computer Organization and Architecture, Operating Systems, System Security, Machine Learning

EXPERIENCE

Summer Internship

Kalasalingam Academy of Research and Education   *Jun 2024 – Jul 2024*

- Worked on an AI-based Presentation Generator from scratch or from a provided template, using Google's Gemini API and React, capable of generating up to 10-slide PPTs.
- Engineered both the React-based frontend and the Python Flask-based backend RESTful API which had 5 routes.
- Engineered the prompts to achieve a 99% accuracy in responses.
- Tech Stack: React, Python, Flask, Prompt Engineering

PROJECTS

Iris Segmentation and Recognition

Tech Stack: Python, OpenCV

- Developed an OpenCV-based project to normalize and process Iris images from pictures of eyes, using the Daugman rubber sheet model for normalization.
- Enhanced the normalized image with multiple methods including Contrast Limited Adaptive Histogram Equalization.
- Analyzed images using OpenCV2's Scale Invariant Feature Transform (SIFT) feature extraction to identify key features and recognize the iris with over 95 percent accuracy.

Pallier Cryptosystem Implementation

Tech Stack: Python, JavaScript, HTML, CSS

- Implemented the Paillier Cryptosystem in Python and adapted it into a seamless web application.
- Utilized pseudo-random generators and the Miller-Rabin primality test to create an algorithm that generates prime numbers of around 1024 bits and optimized the key generation process to run 70 percent faster than the initial version.

Leave Management System

Tech Stack: NodeJS, MySQL, HTML/CSS

- Devised a Leave Management System to facilitate easier leave approvals for management.
- Managed requests by setting up a NodeJS backend server to communicate with the MySQL server holding more than 100 users' credentials and leave requests.
- Implemented a cookie-based authentication system for security.

CERTIFICATIONS

IBM Full Stack Software Developer Professional Certificate

IBM on the Coursera platform

- Finished 10 courses on various application development, software design and cloud technologies and applied the knowledge to a capstone project. Acquired skills and knowledge to undertake challenges in developing cloud-native applications.

Artificial Intelligence Foundation Certification

Infosys Springboard

- Covered foundational topics and gained Understanding of Machine learning, Artificial Intelligence, Deep Learning and Natural Language Processing

SKILLS

Programming: Python (Django and Flask), Java, C++, C, JavaScript (React and Node), HTML/CSS, SQL
Tools: Git, Docker, Android Studio, Selenium, OpenCV, Matplotlib, SciKit Learn, Wireshark, Ghidra
Known Languages: English, Telugu and Hindi