PAVAN SAI SASIDHAR APPALLA

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EDUCATION

North Carolina State University Aug 2024 - Present
Master of Science in Computer Science **CGPA 3.5/4**
- Key Courses - Foundations Of Cryptography, Design Analysis of Algorithms, Software Engineering

Gandhi Institute Of Technology And Management Oct 2020 - Mar 2024
Bachelor of Technology in Computer Science and Engineering (Cyber-Security) **GPA 8.65/10**
- Key Courses - Operating Systems, Computer Networks, Network Security, and Web Application Security

EXPERIENCE

Student Intern | **ISRO-National Remote Sensing Center** Jun 2023 - Aug 2023
- Gained hands-on experience in remote sensing techniques, data acquisition, and satellite imagery analysis.
- Applied Digital Image Processing (DIP) techniques for image enhancement, classification, and feature extraction.
- Assisted in analyzing geospatial data for environmental and urban studies.

KEY PROJECTS

Kwizzy - Ideathon Quiz Website Development Jun 2023
- Collaborated with a team to develop a quiz website within a strict two-day timeframe.
- Utilized web technologies to conceptualize, design, and implement an interactive quiz platform.
- Demonstrated agility and teamwork in addressing technical challenges under tight deadlines.

Crash My Hash Sep 2023
- Built a CTF tool for cracking hash values using PHP/XAMP and frontend web technologies.

Malware Analysis Using Machine Learning Sep 2023 - Mar 2024
- Developed a machine learning-based system to detect malicious Windows executables.
- Overcame challenges such as zero-day threats and class imbalance using robust feature engineering.
- Enhanced detection reliability via real-time monitoring and adaptive algorithms.

CineScout - Movie Recommender Oct 2023
- Built a collaborative filtering recommendation engine using Python and Flask.
- Integrated user feedback and automated email notifications for personalized movie suggestions.
- Optimized recommendation diversity across genres and film attributes.

BurnOut - Your Wellness Companion Nov 2023
- Developed a comprehensive wellness application for tracking calorie intake, water consumption, and workouts.
- Integrated features like user authentication, profile customization, and social connectivity.
- Implemented a BMI calculator and workout tracking to support personalized health goals.

IoT Sensor Networks for Home Automation & Security Early 2025
- **Project 1 :** Developed an MQTT-based sensor network using Raspberry Pis interfaced with LDR and potentiometer to control LED states.
- **Project 2 :** Implemented an IMU-based door event detection system with cloud classification for real-time door open/close status updates.

Wildfire Detection Network Using IoT Spring 2025
- Designed an IoT-based wildfire detection system leveraging infrared, gas, humidity, and temperature sensors.
- Employed solar-powered sensor nodes and wireless communication (LoRaWAN/WiFi) with cloud integration for real-time alerts.

PUBLICATIONS

1. **A. Pavan Sai Sasidhar**, Likhit Prabhas, P. Jayanth Vamsi, T. Kali Krishna Sagar, P. Manasa Devi **Detecting Malware in The Age of AI: A Machine Learning Journey** *IJIRT 2024*
2. Developed insights on machine learning based malware detection, focusing on adaptive algorithms and anomaly detection techniques.

SKILLS

Programming	Python, Java, Bash, SQL, HTML, JavaScript
Tools & Software	scikit-learn, Matplotlib, Arduino, Pandas, Nmap, Burp Suite, Nikto
Expertise in	Ethical Hacking, Web Development, IoT Systems, Computer Networks