KIRAN KUMAR CH

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EDUCATION

Bachelor of Technology in Computer Science Engineering with Cyber Security and Digital Forensics

VIT Bhopal University, Sehore | CGPA: 8.23

September 2022 - Present

Higher Secondary Education (12th)

Bharani Park Higher Secondary School, Karur, Tamil Nadu / Percentage: 73.0% May 2022

Secondary Education (10th)

Bharani Park Higher Secondary School, Karur, Tamil Nadu / Percentage: 72.0% May 2020

PROFESSIONAL EXPERIENCE

Cyber Security Intern [<u>Link</u>]

The Red Users | February 2025 - March 2025

- Network Security & Threat Analysis: Researched malware (viruses, worms, trojans) and phishing attacks, implemented firewall configurations (Windows Defender), and secured networks using WPA2/WPA3 encryption.
- Traffic Analysis with Wireshark: Captured and analyzed HTTP, DNS, and TCP/IP traffic to detect anomalies and potential security threats.
- **Web Application Security Testing:** Used OWASP ZAP to scan and assess vulnerabilities in WebGoat, identifying and exploiting SQL Injection, Cross-Site Scripting (XSS), and CSRF vulnerabilities.
- **Penetration Testing & Exploitation:** Conducted manual web application testing, injecting SQL payloads and modifying web requests to assess security risks.
- **Security Documentation & Mitigation:** Created detailed reports, documenting findings, exploitation steps, and preventive strategies to mitigate security vulnerabilities.
- **Tools & Technologies:** Wireshark, Windows Defender Firewall, OWASP ZAP, WebGoat, SQL Injection, XSS, CSRF, WPA2/WPA3 Encryption.

Leadership & Volunteering Experience

National Service Scheme (NSS), VIT Bhopal | Team Lead | October 2022 - November 2024

- Led a team of volunteers to organize community service initiatives, awareness campaigns, and social welfare programs.
- Coordinated with local authorities and NGOs to implement impactful projects, including environmental sustainability, education, and health awareness drives.
- Managed event planning, logistics, and volunteer training, enhancing leadership, teamwork, and organizational skills.
- Successfully executed multiple outreach programs, benefiting hundreds in the local community.

UNIVERSITY PROJECTS

Malware Analysis Signature-Based Using Static and Dynamic Analysis [Link]

- **Description:** Conducted an in-depth analysis of a specific malware sample to examine its behavior, capabilities, and impact on systems and networks using **signature-based**, **static**, **and dynamic analysis** techniques.
- **Project Outcome:** Provided detailed insights into the malware's characteristics, attack vectors, and potential security risks, aiding in threat detection and mitigation.
- Role: Led research efforts, performed static analysis, and authored comprehensive technical documentation.
- **Research Contribution:** Authored a **detailed research paper** outlining methodologies, findings, and cybersecurity implications, contributing valuable insights to the field.

Streamline Malware Analysis Using Ghindra [Link]

- **Description:** Conducted advanced malware analysis using Ghidra for reverse engineering. Key focus areas included symbolic analysis of strings, identification of vulnerable functions, analysis of malicious symbols in the symbol table, and memory map examination. Developed and implemented custom scripts to automate and enhance analysis efficiency.
- **Project Outcome:** Successfully automated malware analysis workflows within Ghidra, significantly improving efficiency and vulnerability detection.
- **Future Scope:** Further integration of advanced automation techniques to streamline malware analysis within the Ghidra framework.
- Tools & Technologies: Ghidra, C++, Custom Scripting
- **Research Contribution:** Co-authored a detailed research paper exploring novel techniques for malware analysis using Ghidra, presenting key findings and insights.

SIDE PROJECTS

Anadhanam App (Bhojan Seva)

- **Description**: Developed an app facilitating Annadhanam scheduling and donations with features like real-time meal availability, notifications, and tax receipt generation.
- Features: Login system, feedback section, photo gallery, payment page, and 24/7 chat support.
- Tools and Technologies: Android Studio, Firebase.

Farm Easy App

- **Description**: Developed a platform to connect small-scale farmers with buyers, streamlining produce sales and ensuring fair pricing.
- Problem Statement (SIH): Farmers face challenges in selling their produce directly to buyers due to middlemen, lack of market
 access, and logistical barriers. FarmEasy addresses these challenges by providing a seamless platform for direct transactions and
 integrated logistics support.
- Features: Farmer listings, buyer inquiries, logistics support, secure transactions, and notifications for delivery updates.
- Tools and Technologies: Android Studio, Kotlin, Firebase.

Guide Link - A Tour Guide App

- **Description**: Designed a platform connecting tourists and guides with personalized itineraries, real-time availability, and dynamic pricing.
- Features: In-app chat, role-switching (tourist/guide), payment integration, and feedback system.
- Tools and Technologies: Flutter, Firebase, Android Studio.

CO-CURRICULARS AND ACHIEVEMENTS

Coding Proficiency

- GeeksforGeeks: Currently working on a 160-day coding challenge.
- Leetcode: Actively participating in a 360-day coding challenge

ADDITIONAL

Technical Skills: Java, Python, C++, HTML, CSS, React.js, Android Studio, Kotlin, SQL, RESTful APIs, Hugging Face Data Visualization, Google Analytics, AWS, EC2, S3, IAM.

Certificates: HTML, CSS, and JavaScript for Web Developers, The Bits and Bytes of Computer Networking, Python Essentials, Fundamentals of AIML, Unstop Flipkart Grid, Cisco Junior Cybersecurity Analyst, NPTEL. [Link]

Hackathon Experience: Skill India Hackathon 2024, Built an urban mobility solution at Namma Yatri Hackathon

Language: English, Telugu, Tamil, Hindi, French