 INTERNET PROTECTING SYSTEM



PROJECT PHASE-I REPORT

***Submitted by***

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**ABSTRACT**

The Internet Protection System (IPS) stands as a robust security solution designed to deliver unparalleled stealth, insightful network analysis, and formidable protection in today’s intricate digital landscape. By addressing the paramount needs for anonymity, visibility, and resilient security, IPS integrates three potent features: IP ghosting, port scanning, and vulnerability scanning. The IP Ghosting tool facilitates anonymous browsing by effectively concealing users’ IP addresses and geographic locations, thereby safeguarding them against tracking, surveillance, and potential cyber threats, and ensuring their digital footprint remains hidden. Complementing this, the Port Scanner meticulously examines network ports to identify open or vulnerable points, enabling users to detect and mitigate potential security risks, optimize network configurations, and enhance overall system performance and resilience. Additionally, the Vulnerability Scanning component conducts thorough assessments of software and hardware infrastructures to uncover weaknesses that could be exploited by malicious actors, providing actionable insights for timely remediation, and strengthening of defenses. Together, these features empower users with unprecedented control over their online presence, comprehensive network awareness, and proactive threat mitigation capabilities, ensuring a secure, efficient, and invisible digital experience in an ever-evolving cyber threat landscape.

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**LIST OF ABBREVATIONS**

|  |  |
| --- | --- |
| **API** | Application Programming Interface |
| **AWS** | Amazon Web Service |
| **CVE** | Common Vulnerabilities and Exposures |
| **DDOS** | Distributed Denial of services |
| **DNS** | Domain Name System |
| **FTPS** | File Transfer Protocol Secure |
| **HTTP** | Hypertext Transfer Protocol |
| **IOT** | Internet of Things |
| **IP** | Internet Protocol |
| **CC** | Cyber Cloak |
| **Nmap** | Network Mapper |
| **OpenSSL** | Open Secure Socket Layer |
| **Open VAS** | Open Vulnerability Assessment System |
| **OS** | Operating System |
| **PKI** | Public Key Infrastructure |
| **RSF** | Random Survival Forests |
| **SSH** | Secure Shell |
| **SSL/TLS** | Secure Socket Layer / Transport Layer Security |
| **TOR Network** | The Union Router Network |
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