

## 1. Functional Requirements:

- **Threat Identification System:** Identify various cybersecurity threats like malware, phishing, DDoS attacks, and insider threats.
- **Real-time Threat Monitoring:** Continuous monitoring of networks and systems for suspicious activities.
- **Risk Assessment Tools:** Analyzing vulnerabilities and predicting potential attack surfaces.
- **Incident Response Mechanism:** Automated alerts and response strategies to mitigate attacks.
- **User Authentication and Access Control:** Implementing multi-factor authentication (MFA) and zero-trust architecture.
- **Data Encryption and Secure Communication:** Safeguarding sensitive data during transmission and storage.

## 2. Non-Functional Requirements:

- **Scalability:** Handle large volumes of data and traffic in real-time.
- **Performance:** Fast response time to detect and respond to threats.
- **Reliability:** Ensure system uptime and protection against cyber-attacks.
- **User-Friendly Interface:** Intuitive dashboards for threat visualization.
- **Compliance and Privacy:** Adherence to regulations like GDPR, HIPAA, and PCI-DSS.

## 3. Technical Requirements:

- **Security Tools and Technologies:** Firewalls, Intrusion Detection Systems (IDS), and antivirus software.
- **Artificial Intelligence (AI) and Machine Learning (ML):** Predictive threat analysis and anomaly detection.
- **Cloud-based Security Solutions:** Secure cloud infrastructure and data storage.
- **Blockchain for Data Integrity:** Prevent unauthorized access and tampering.
- **Encryption Protocols:** SSL/TLS, AES encryption.

#### 4. User Requirements:

- **Cybersecurity Professionals:** Real-time threat intelligence and incident management.
- **Organizations:** Data protection and compliance with legal frameworks.
- **End Users:** Secure digital transactions and privacy protection.

#### 5. Design and Aesthetic Requirements:

- Colorful and interactive dashboards for threat visualization.
- Infographics to represent threat patterns and attack vectors.
- User-friendly interface for easy navigation and data analysis.

#### 6. Constraints:

- Budget limitations for implementing advanced security solutions.
- Compatibility with existing IT infrastructure.
- Legal and compliance requirements.

