School of Computer Science and Engineering

Department of Computer Engineering and Technology (DCET)

Full Stack Development Project
Panel-A

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Problem Statement & Proposed Solution

Problem Statement:
Many companies face significant cybersecurity risks but lack a healthy insurance, accessible way to compare cyber insurance options tailored to their specific risk profiles. The process of finding, comparing, and purchasing insurance is often complex and disconnected from personal threat assessments.

Proposed Solution:
CyberGuard offers a comprehensive cyber insurance comparator platform where users can complete a threat assessment form and receive tailored insurance options and packages. The solution simplifies decision-making, making cyber insurance more accessible and customized for both individuals and organizations.

Process Flow Diagram & System Architecture
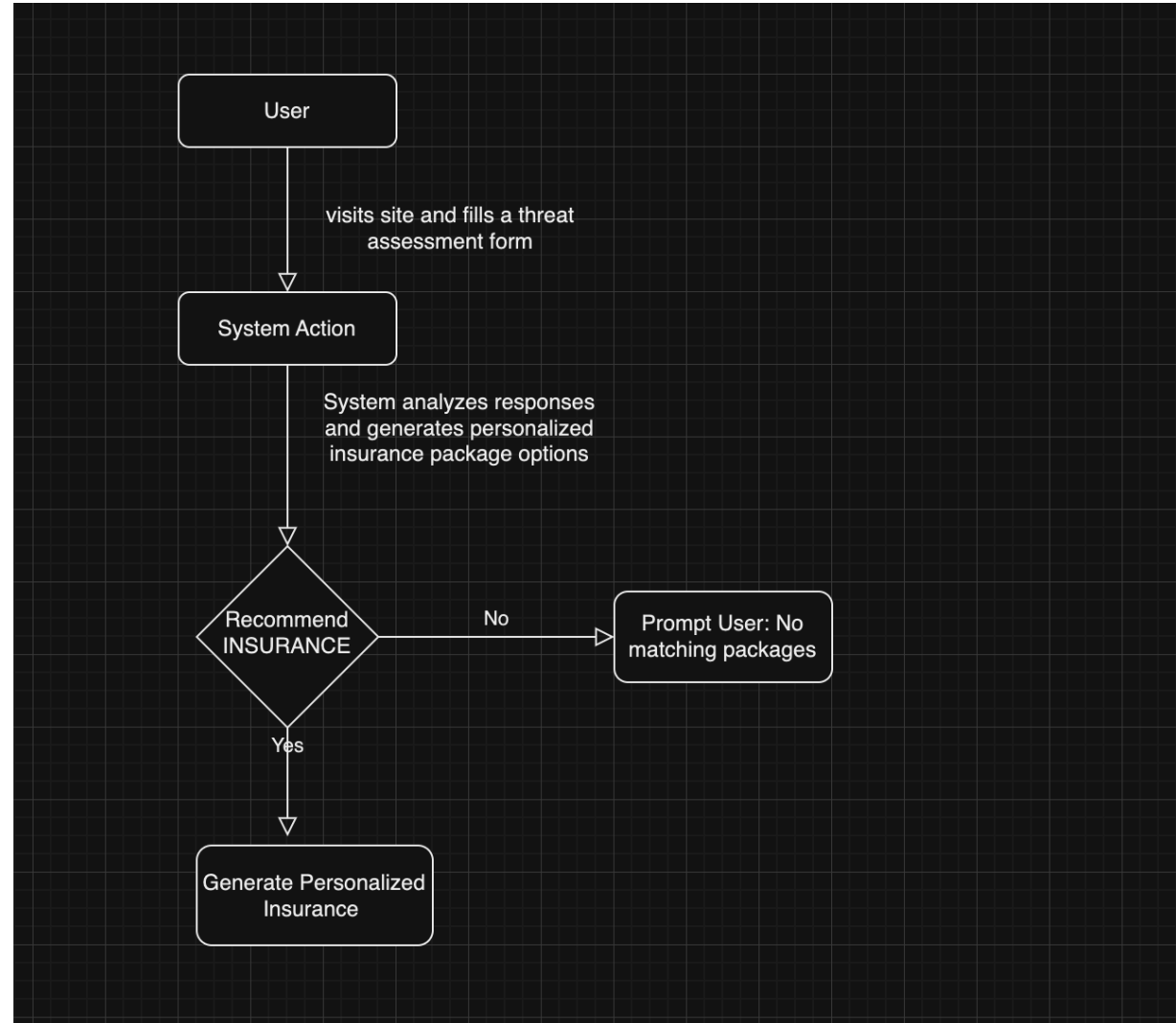
Technical Stack with Reasoning

•**Frontend (HTML, CSS, JavaScript, React)**: Chosen for creating an interactive, responsive UI that provides a smooth experience. React ensures efficient state management and reactivity, making it ideal for forms and complex UI interactions.

•**Backend (Node.js)**: Selected for its scalability and ability to handle real-time interactions. Node.js works well with MongoDB for a full JavaScript environment, simplifying development.

•**Database (MongoDB)**: A flexible NoSQL database well-suited to handling dynamic data structures, such as varied threat assessment responses and customized insurance packages.

Challenges Faced during development if Any

- **Form Complexity**: Designing a threat assessment form that's thorough yet user-friendly.

- **Data Privacy & Security**: Ensuring user data security during threat assessments and results storage.

- **Integrating Insurance Options**: Customizing insurance packages based on form inputs was complex.

- **Future API Integrations**: Preparing a system architecture that could adapt to partner integrations was challenging.

Limitation and scope of the project with future projection extension

Current Limitations:
•No direct purchasing options; users can only view packages.
•Lack of real-time data updates due to absence of insurance partner API integration.
•User account creation and tracking are not yet implemented.

Scope and Future Extensions:
•Implement direct purchasing capabilities and integrate APIs from insurance partners.
•Add secure user accounts and data management, allowing users to save and revisit options.
•Enhance threat assessment sophistication using AI to further tailor package options based on advanced threat profiles.

Working Demo

- Demo Flow: Threat Assessment Form: Users begin by filling out a detailed form with relevant organizational or personal details, including size, industry, and current cybersecurity measures.

- Risk Scoring: The platform uses the NIST framework to calculate a risk score based on the provided information.

- Tailored Recommendations: Based on the risk score, CyberGuard generates a list of personalized insurance options and packages.

- Comparison Dashboard: Users can compare multiple policies side-by-side, evaluating coverage, cost, and benefits to make an informed decision.

Q/A

•**How does CyberGuard calculate the risk score?**
CyberGuard uses the NIST cybersecurity framework, evaluating user-provided data such as industry, company size, and existing security measures to generate a tailored risk score.

•**Can the platform cater to both individuals and organizations?**
Yes, CyberGuard is designed to provide customized solutions for both individual users and businesses of varying sizes.

•**What types of insurance policies are included?**
The platform compares a wide range of cyber insurance policies, covering data breaches, ransomware, business interruption, and more, based on the user's risk profile.

•**Is the threat assessment process user-friendly?**
Absolutely. The platform offers a simple, step-by-step form that guides users through providing necessary information without technical expertise.

•**How does CyberGuard ensure data privacy?**
All user data is encrypted and securely stored, adhering to strict privacy regulations to protect sensitive information.