A cartoon of a egyptian god

Description automatically generatedA computer network diagram with a globe and arrows

Description automatically generated with medium confidence

**Cairo University**

**Faculty of Computers and Artificial Intelligence**

**Department of Networks and cybersecurity**

**Safe Net**: The Security Shield

A logo of a security shield

AI-generated content may be incorrect.

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# LIST OF ACRONYMS/ABBREVIATIONS

|  |  |  |
| --- | --- | --- |
| **Acronym** | **Definition of Acronym** | **Page** |
| URLs | Uniform Resource Locators | 6 |
| API | Application Programming Interface | 6 |
| AI | Artificial Intelligence | 6 |
| SQL | Structured Query Language | 6 |
| SPF | Sender Policy Framework | 7 |
| DKIM | DomainKeys Identified Mail | 7 |
| DMARC | Domain-based Message Authentication,  Reporting, and conformance | 7 |
| IDE | Integrated Development Environment | 7 |
| IT | Information Technology | 11 |
| ERD | Entity-Relationship Diagram | 17 |

The motivation for this project is rooted around the escalating and pervasive threat of phishing attacks, which represent a significant challenge to modern cybersecurity. These attacks are no longer rudimentary scams; they have evolved into highly sophisticated operations that leverage social engineering to steal sensitive credentials, financial information, and personal data. The consequences for individuals and organizations are severe, ranging from direct monetary loss and identity theft to widespread data breaches that can cripple a company's operations and its reputation.

A critical vulnerability in this digital ecosystem is the human factor. Many users, regardless of their technical proficiency, lack the specialized tools and, more importantly, the situational awareness needed to detect these deceptive emails and links. Existing security solutions often fall short of addressing this gap. They can be overly complex for the average user, requiring technical configuration that creates a barrier to entry. Furthermore, many tools are platform-specific—such as desktop antivirus software or browser extensions—leaving users unprotected across the multitude of devices they use daily.

This creates a clear and urgent need for an accessible, intuitive, and centralized tool. Safe Net is designed to fill this void. Our motivation is not merely to create another layer of defense, but to empower the user directly. We do that by providing a platform that combines immediate phishing detection, a simple mechanism for reporting malicious URLs, and integrated educational resources, we aim to enhance overall online security from the ground up while also educating users about potential threats. The goal is to transform the user from a potential victim into an informed and proactive participant in their own digital safety, thereby fostering a more resilient and secure online environment for everyone.