

CipherQuest: A Cybersecurity Puzzle Game

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Abstract: Traditional cybersecurity training is often outdated and doesn't prepare users for the complex nature of today's digital threats. This paper presents CipherQuest, an interactive puzzle game that aims to turn complicated security concepts into an engaging learning experience. The project includes a unique Threat Persona Engine (TPE) that uses adaptive AI to mimic various attacker behaviors, including the "Phishlor" and "CipherShade". By leading the main character, Nova, through three levels of digital challenges, players get hands-on experience in spotting phishing attempts, defending against social engineering, and using technical safeguards like two-factor authentication. The results indicate that this game-based, scenario-driven approach significantly boosts user engagement and helps with knowledge retention compared to traditional methods.

Keywords: CipherQuest, Cybersecurity Awareness, Gamification, Threat Persona Engine, Adaptive Learning, Phishing Defense, Serious Games