



Abschlussvortrag Masterarbeit Alaa Eddin Al Shammaa

„Gamified Cybersecurity Education: Measuring the Impact of AI-Driven Scenarios on Phishing Awareness“

Phishing attacks are always a potential threat to any internet user. Previous studies have focused on phishing awareness training through presentations, tests, static scenarios, web pages, and limited phishing topics. Although some studies explored educational games for phishing awareness, they often lack the dynamic, interactive, and varied scenarios needed to fully engage users. This thesis explores the use of an interactive 3D game to improve user awareness in detecting phishing attempts by simulating unlimited, dynamic scenarios of phishing attack problems in an engaging 3D environment to keep challenge and motivation high. The game incorporates interactive scenarios powered by AI for various topics of phishing. Players can engage in realistic, real-time conversations with non-playable characters about cybersecurity threats, investigations, and an environment filled with different cybersecurity stories to attract the player's attention while learning. To evaluate the impact of the game on users, a study was conducted with tests before (pre-test) and after (post-test) playing the game; post-test scores were noticeably higher than pre-test scores, indicating the game's educational potential as an effective tool for enriching cybersecurity knowledge and increasing awareness of phishing.

Betreuer der Arbeit: Prof. Dr. Mohammad Ghafari, Prof. Dr. Rüdiger Ehlers

Datum: Dienstag, 23. September 2025, 12:30 Uhr

Ort: Online-Meeting über BBB

Link: <https://webconf.tu-clausthal.de/rooms/y7p-hrb-ks5-aa9/join>