

46

ITREX 2025
11th CREATION, INNOVATION, TECHNOLOGY & RESEARCH EXHIBITION
17-18 June 2025
8:00 am - 5:00 pm

Investor:
ASSOC. PROF. TS. DR. MOHD FAIZAL
IB BAZAK
Institution: Universiti Malaysia Pahang
Al-Sultan-Ali-Abdullah
Email: fazarazak@ump.edu.my

Co-Inventor:
NOR SABADATUL AKMAR ZULKIFLI
DANAHORN NINCAREAN AL. EH PHON
AMRUD FIRDAUS ZAINAL ABIDIN
AMRUL AIDIL HASNUL AZAN
MOHAMMAD DANIAL NABIL MOHAMMAD YUSOF

CYBERSECURE VR: IMMERSIVE MICROCREDENTIAL IN THREAT SIMULATION AND RESPONSE

Product Background

- Immersive Training Tool: Provides hands-on learning through virtual reality.
- Focus on Cybersecurity: Teaches essential cybersecurity skills.
- Interactive Scenarios: Simulates real-world situations like securing systems, preventing phishing, and defending against cyberattacks.
- Built with Unity and C#. Developed using advanced game development technologies for a seamless VR experience.
- Safe Learning Environment: Enables users to practice and make mistakes without real-world consequences.
- Practical Skills Development: Helps users build confidence and proficiency in cybersecurity defense strategies.

Achievements

- Silver Medal → International Competition and Exhibition on Computing Innovation 2024

Patent

Statik: BARI FIED LY02222022 - Das

Collaboration: CITRA

Impacts

- The environmental impact is minimal, relying on digital tools for development. Indirectly, it helps reduce cybercrime risks and secures critical digital infrastructure, contributing to a safer digital world.

Cost Analysis

- Customization
- Cost of hardware
- Development
- Quality of content
- Third Party Integrations
- Testing and optimization
- Development team size

Marketability

Virtual Reality Development Cost
Global Market - Europe 2023



[Research](#)

Penyelidik UMPSA Prof. Madya Ts. Dr. Mohd Faizal bangunkan Latihan Siber Berasaskan Realiti Maya

6 August 2025

PEKAN, 6 Ogos 2025 - Menyedari bahawa latihan keselamatan siber konvensional sering kali kurang memberi impak kerana ketiadaan elemen simulasi realistik, satu pasukan penyelidik Fakulti Komputeran (FK) Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA) yang diketuai oleh Profesor Madya Ts. Dr. Mohd Faizal Ab Razak telah membangunkan *CyberSecure VR* iaitu satu sistem latihan berasaskan realiti maya (VR) yang imersif dan interaktif.

Penyelidikan ini turut mendapat kerjasama daripada Ts. Dr. Danakorn Nincarean a/l Eh Phon, Ts. Dr. Ahmad Firdaus Zainal Abidin dan Ts. Dr. Nor Saradatul Akmar Zulkifli serta wakil dari Citra Digital, Amirul Aidil Hasnul Azan dan Mohamad Danial Nabil Mohamad Yusof.

Menurut Profesor Madya Ts. Dr. Faizal, *CyberSecure VR* bertujuan untuk meningkatkan kemahiran tindak balas terhadap ancaman siber dalam kalangan pelajar dan tenaga kerja.



Inventor:
ASSOC. PROF. TS. DR. MOHD FAIZAL
AB RAZAK
Institution: Universiti Malaysia Pahang
Al-Sultan Al-Abdullah
Email : faizalrazak@umpsa.edu.my

Co-Inventor:
NOR SARADATUL AKMAR ZULKIFLI
DANAKORN NINCAREAN A/L EH PHON
AHMAD FIRDAUS ZAINAL ABIDIN
AMIRUL AIDIL HASNUL AZAN
MOHAMAD DANIAL NABIL MOHAMAD YUSOF

CYBERSECURE VR: IMMERSIVE MICROCREDENTIAL IN THREAT SIMULATION AND RESPONSE

Product Background

- Immersive Training Tool: Provides hands-on learning through virtual reality.
- Focus on Cybersecurity: Teaches essential cybersecurity skills.
- Interactive Scenarios: Simulates real-world situations like securing systems, preventing phishing, and defending against cyberattacks.
- Built with Unity and C#: Developed using advanced game development technologies for a seamless VR experience.
- Safe Learning Environment: Enables users to practice and make mistakes without real-world consequences.
- Practical Skills Development: Helps users build confidence and proficiency in cybersecurity defense strategies.



Achievements

Silver Medal → International Competition and Exhibition on Computing Innovation 2024

Patent

Status: DATE FILED
LY2025C01032 - Date: 25/02/25

Collaborations



Impacts

- The environmental impact is minimal, relying on digital tools for development. Indirectly, it helps reduce cybercrime risks and secures critical digital infrastructure, contributing to a safer digital world.

Cost Analysis



Marketability



Acknowledgement

This work was supported by Universiti Malaysia Pahang Al-Sultan Al-Abdullah, under the internal grant PPU230106.

“Pengguna sistem ini akan memakai set VR dan berinteraksi dalam dunia maya yang menyerupai persekitaran kerja sebenar.

“Mereka perlu bertindak balas terhadap ancaman seperti serangan *phishing* dalam masa nyata.

“Setiap tindakan pengguna akan dianalisis untuk tujuan pembelajaran dan penilaian,” ujarnya.

Tambahnya, penyelidikan yang bermula pada bulan Januari 2024 ini telah melalui dua fasa penting iaitu pembangunan modul micro-credential yang siap pada bulan Jun 2024, diikuti dengan pembangunan prototaip VR serta reka bentuk senario pembelajaran yang dijangka siap sepenuhnya menjelang Disember 2025.

“*CyberSecure VR* mendapat sokongan daripada Pusat Inovasi dan Daya Saing Akademik (PIDA) menerusi geran Pengajaran dan Pembelajaran (PPU230106) bernilai RM27,000.

“Ia disasarkan menjadi platform latihan siber kompetensi yang mudah diakses dan mampu meningkatkan kesedaran siber dalam masyarakat.

“Usaha ini turut menyokong pembangunan modul micro-credential bagi kursus seperti Ethical Hacking melalui kerjasama bersama CIREL UMPSA,” katanya.

Penyelidikan ini juga telah memperoleh *Nova T: Emerging Tech dan Outstanding Business Management Micro-Credential Award* dalam Pameran *Creation, Innovation, Technology and Research Exposition (CITREX) 2025* anjuran UMPSA pada 18 hingga 19 Jun 2025 di Dewan Kompleks Sukan UMPSA Kampus Gambang.



Selain itu, pasukan penyelidik juga merancang untuk memperluaskan sistem dengan lebih banyak

modul simulasi seperti pengurusan krisis dan forensik siber.

Mereka juga berharap dapat bekerjasama dengan agensi latihan profesional untuk memperakui program ini sebagai modul CPD-certified, sekali gus meningkatkan kebolehpasaran graduan dan tenaga kerja dalam sektor keselamatan siber.

Disediakan Oleh: Nur Hartini Binti Mohd Hatta, Pusat Komunikasi Korporat

TAGS / KEYWORDS

[Penyelidik UMPSA](#)

[Latihan Siber Berasaskan Realiti Maya](#)

- 95 views

[View PDF](#)