2025 network security class

Individual project

Topic

Four areas, 16 topics

**[Area1] Creative AI**

1-1

AI program coding model for database security system hosted on cloud using creative AI program

1-2

Creating a creative AI program to build web application security system hosted on the cloud

1-3

AI program coding model for blocking against hacking for database on cloud system using creative ai language

1-4

AI program coding model for blocking network hacking for cloud system using creative ai language

**[Area2] Natural language**

2-1

AI program coding model for database security system hosted on cloud using natural language AI program

2-2

AI program coding model for attacking, detecting, blocking and monitoring against DDoS natural language

2-3

AI program coding model surveying vulnerability on URL https://en.ctu.edu.vn/ using Natural language

**[Area3] Reinforcement Learning**

3-1

AI program coding model for attacking, detecting, blocking and monitoring against DDoS Through Reinforcement Learning

3-2

AI program coding model for attacking, detecting, blocking and monitoring against DDoS Through Reinforcement Learning

3-3

AI program coding model for intrusion detecting against network hacking Through Reinforcement Learning

3-4

AI program coding model for IoT security against network hacking Through Reinforcement Learning

3-5

AI program coding model for cloud security against network hacking Through Reinforcement Learning

3-6

AI program coding model surveying vulnerability on URL https://en.ctu.edu.vn/ using reinforcement learning

**[Area4] Adaptive AI**

4-1

AI program coding model surveying vulnerability on URL https://en.ctu.edu.vn/ using Adaptive AI

4-2

Creating an AI-based Natural Language Processing (NLP) program to detect web application vulnerabilities hosted on the cloud

**4-3**

Coding an adaptive AI program for IoT server risk detection

**AI program coding Individual project report**

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**Year 2025 Network Security**

|  |  |
| --- | --- |
| Class |  |
| Student ID |  |
| Student name |  |
| Student email |  |
| Submitted date |  |

1. **Title :**
2. **System resource**

|  |  |
| --- | --- |
| OS & version | Linux, Windows |
| Browser |  |
| IP address | Source IP  Target IP or URL |
| Attacking type |  |
| Language & version | Python3, Python library |
| AI Technology type | ML, DL, [Generative AI, Complex AI](https://aws.amazon.com/ai/generative-ai/?trk=4af8ad43-36e3-4c9a-b99c-5eb175237ea9&sc_channel=ps) |
| Library | Scikit Learn, TensorFlow |
| Algorithm | Isolation Forest, One-Class SVM, |

**3. Purpose of study(under five lines)**

(ex)

The purpose of this study is to establish the development direction about the system detecting and responding to the malicious codes. For this, we carried out a research on the domestic and foreign technologies that detect and deal with the spreading malicious codes.

**4. Scope of survey(list up the scope of the studying by items)**

**5. Results of the exercise**

**5.1 Project introduction**

**5.2 Main subject**

Table 1. Comparative framework of Education VS. Training

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

\*Source:NIST Special Publication 800-16

Figure 1. Information security learning continuum

\*Source:NIST Special Publication 800-16

**5.3 Print out original code of reference site(show reference)**

**5.4 Print out changed source code of your own**

**5.5 Explain main logics**

**5.5 print our program running result**

**5.6 Analyze the running result**

**6. Technical Problems and Solutions**

6.1 Problems

Describe the problems to be solved for information security that has been recognized as a result of this research work

6.2 Solutions

As a student, please suggest a solution to solve the problem you discovered while studying this assignment. This solution is a free idea or opinion, because it is a suggestion from a stdent

**7. Reference**

[1] <http://root0or.tistory.com/entry/%EC%8B%A4%EC%95%85%EB%A9%80%EB%B6%81-1-%EA%B8%B0%EC%B4%88-%EC%A0%95%EC%A0%81-%EB%B6%84%EC%84%9D-%EA%B8%B0%EB%B2%95>

[2] [http://kali-km.tistory.com/entry/%EC%95% 85%EC%84% B1%EC%BD% 94%EB%93%9C-%EB%B6%84%EC%84%9D-%EB%B0%A9%EB%B2%95](http://kali-km.tistory.com/entry/%EC%95%25%2085%EC%84%25%20B1%EC%BD%25%2094%EB%93%9C-%EB%B6%84%EC%84%9D-%EB%B0%A9%EB%B2%95)