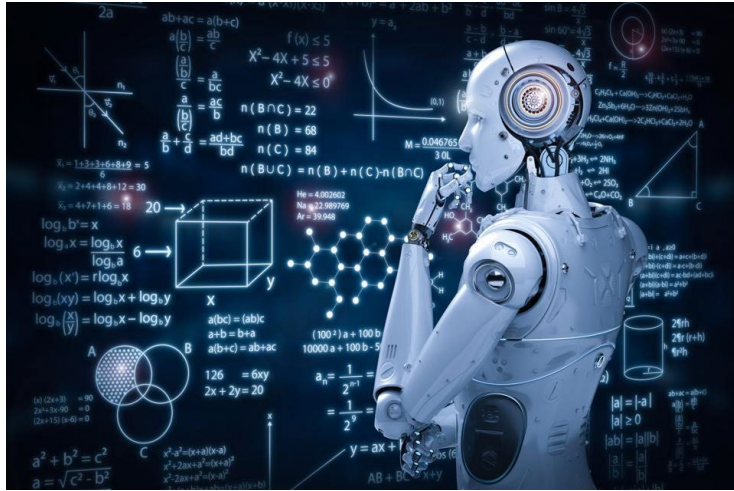


## Machine Learning-Based Auto Feedback System for Cybersecurity Tool

Feedback is an essential part of education to help students understand and learn from their mistakes at any age. However, while students learn new content, there is no live person to provide feedback, especially in a virtual environment. Therefore, there are many software for automated code reviews to provide feedback to programming language learners in terms of code issues, design issues, metrics,

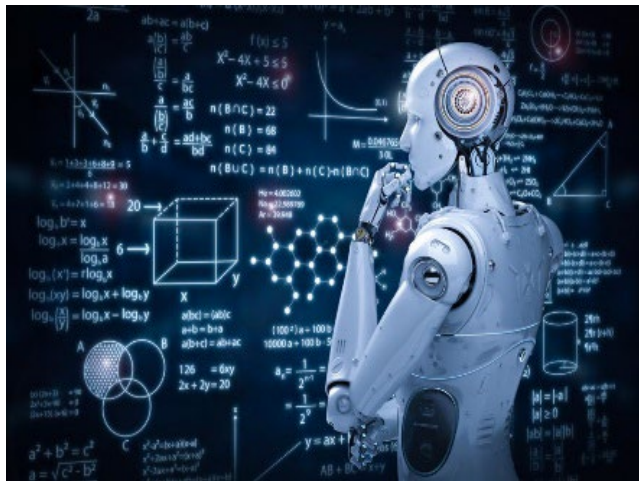


duplication, stability, robustness, security, and maintainability. Although there is no extensive coding in the cybersecurity tools, using commands in security tools is common and more convenient. However, there are no available auto command review tools for security tools except each tool itself and operating system suggestions. There is also no feedback tool that constructively provides feedback according to learners' experiences in security subjects while learners practice with commands. Providing auto constructive feedback according to learners' levels with the commands of

cybersecurity tools will be novel and an essential part of our virtual environment. *The project aims to create a feedback mechanism that builds upon three factors; collecting users' commands in a log file, evaluating each user according to their success for each tool, and identifying similarities of previous commands for auto feedback.*

Project Outcomes:

- Virtual Platform such as a VM
- Auto Feedback System for a Selected Security Tools



**Title:** Machine Learning-Based Auto Feedback System for Cybersecurity Tool

**Aim:** The project aims to create a feedback mechanism that builds upon three factors; collecting users' commands in a log file, evaluating each user according to their success for each tool, and identifying similarities of previous commands for auto feedback.

**Project Outcomes:** Virtual Platform such as a VM, Auto Feedback System for a Selected Security Tools

**Requirements:** Enthusiastic about learning programming, cybersecurity tools, and machine learning algorithms.