Project need to know

Pytorch: PyTorch is an open-source machine learning framework primarily used for developing and training deep learning models. It was developed by Facebook's AI Research Lab (FAIR) and released in 2016

Optim: The **optim** module in PyTorch allows you to perform gradient-based optimization using techniques like Stochastic Gradient Descent (SGD), Adam, RMSprop, and more. These optimization algorithms adjust the model's parameters based on the computed gradients during the backpropagation process.

Adam: Adam (Adaptive Moment Estimation) is another popular optimization algorithm that combines the advantages of both AdaGrad and RMSprop. It adapts the learning rate for each parameter based on estimates of the first and second moments of the gradients

Adam is the optimizer used in this.

Isolation Forest is an unsupervised machine learning algorithm used for anomaly detection.

np.random.seed(seed) was used to set the seed for the pseudorandom number generator to zero

The code **list(line.replace("\"", "").strip().split(';'))** performs several operations on the variable **line**:

1. **replace("\"", "")**: This replaces any occurrences of **"** (double quotes) in the **line** string with an empty string, effectively removing them.
2. **strip()**: This removes any leading or trailing whitespace characters from the **line** string.
3. **split(';')**: This splits the **line** string into a list of substrings at each occurrence of **;** (semicolon).
4. **list()**: This converts the resulting list of substrings into a new Python list.

ESA attack

Np.matmul- is a function in NumPy (a Python library for numerical computations) used for matrix multiplication. It allows you to perform matrix multiplication between two arrays.