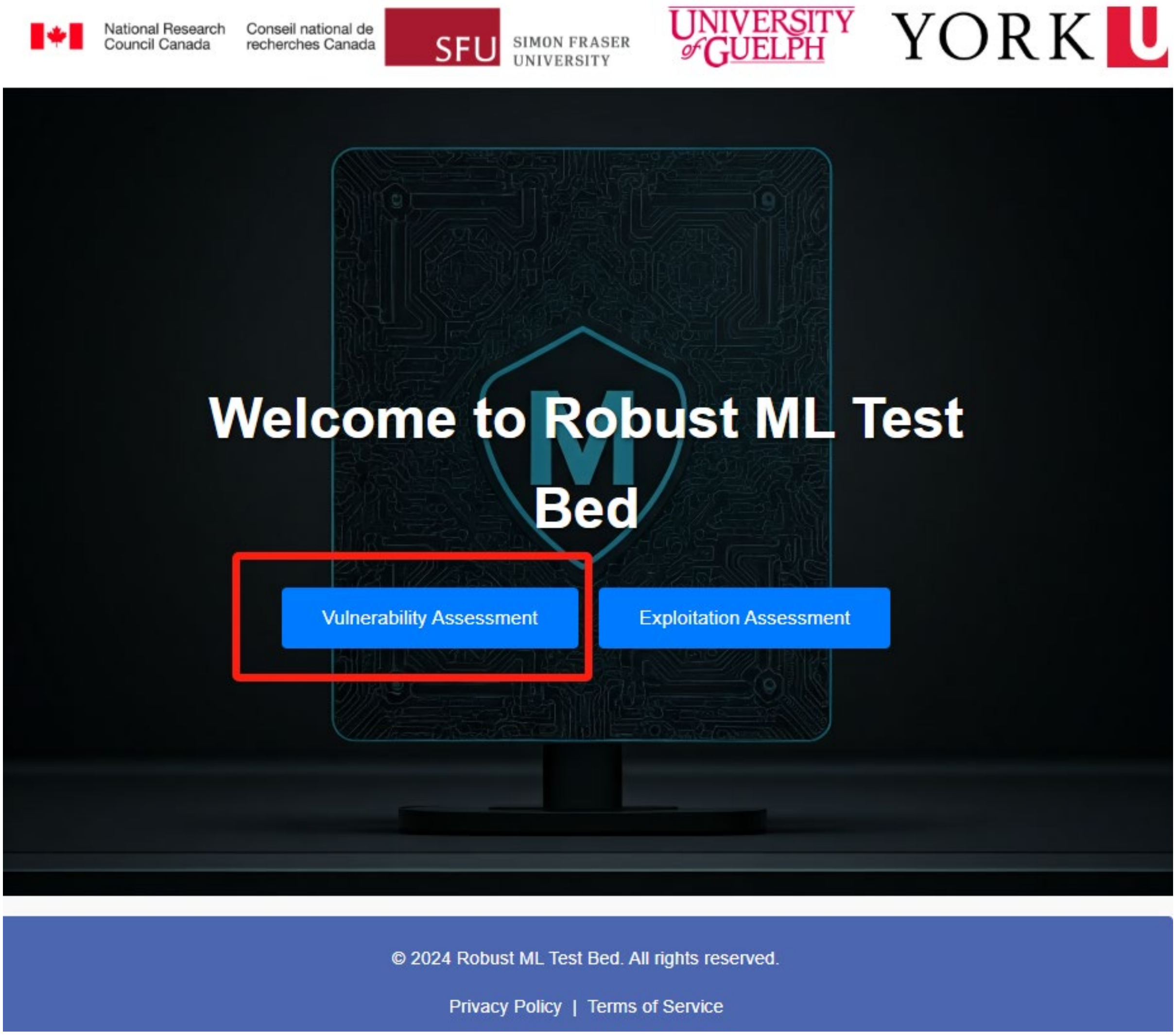
Robust ML Testbed

User Guide

1. Access the website: open a browser, input the address: http://132.246.129.156:3000/, then you will enter the following website.


National Research Council Canada
Conseil national de recherches Canada
SFU SIMON FRASER UNIVERSITY
UNIVERSITY of GUELPH
YORK U
Vulnerability Assessment
Exploitation Assessment
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Welcome to Robust ML Test Bed

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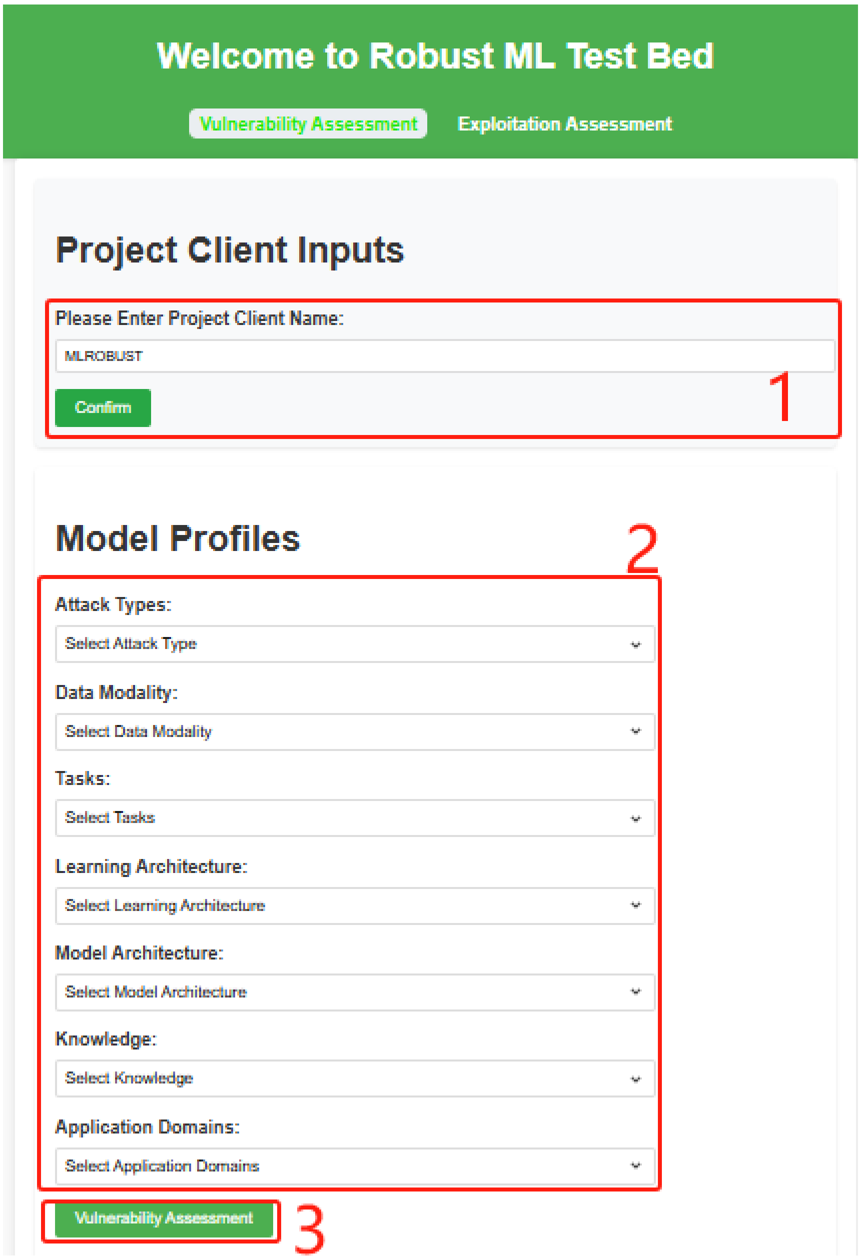
2. Click the “Vulnerability Assessment” Button, then enter the “Vulnerability Assessment”Page.



Welcome to Robust ML Test Bed

Project Client Inputs

Please Enter Project Client Name: MLROBUST

Model Profiles

Attack Types: Select Attack Type

Data Modality: Select Data Modality

Tasks: Select Tasks

Learning Architecture: Select Learning Architecture

Model Architecture: Select Model Architecture

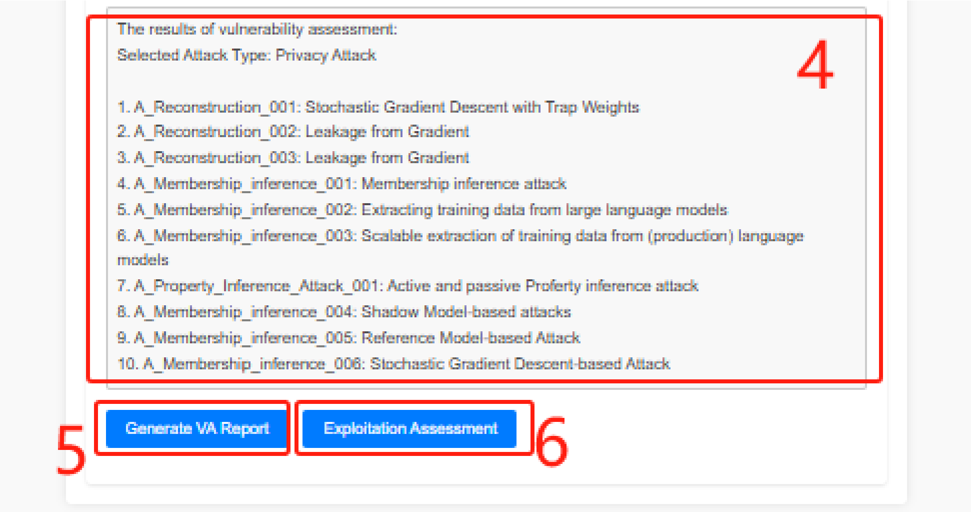
Knowledge: Select Knowledge

Application Domains: Select Application Domains

3 **Step 1:** Input the "Project client name" and press the "confirm" button;

Step 2: Select the Model Profiles based on the following options(including Attack types, data modality, tasks, learning architecture, model architecture, knowledge, application domains);

Step 3: Click the "vulnerability assessment" button,

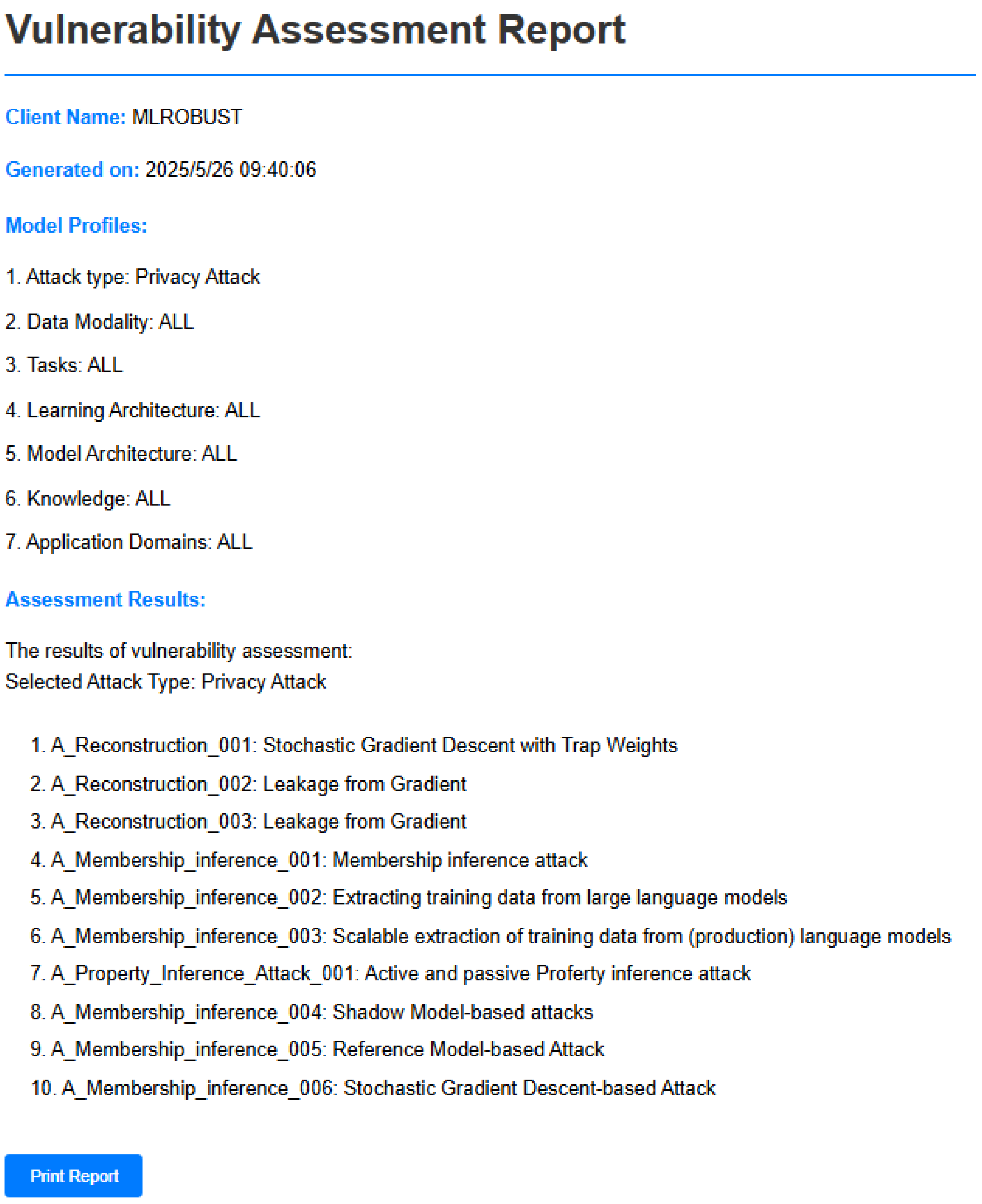


The results of vulnerability assessment:
Selected Attack Type: Privacy Attack

1. A_Reconstruction_001: Stochastic Gradient Descent with Trap Weights
2. A_Reconstruction_002: Leakage from Gradient
3. A_Reconstruction_003: Leakage from Gradient
4. A_Membership_inference_001: Membership inference attack
5. A_Membership_inference_002: Extracting training data from large language models
6. A_Membership_inference_003: Scalable extraction of training data from (production) language models
7. A_Property_Inference_Attack_001: Active and passive Proferty inference attack
8. A_Membership_inference_004: Shadow Model-based attacks
9. A_Membership_inference_005: Reference Model-based Attack
10. A_Membership_inference_006: Stochastic Gradient Descent-based Attack

Step 4: Then you will get the results in Area 4.

Step 5: If you want to save the above information, then you can click the "Generate VA Report" button, and get a report which can be printed.



Vulnerability Assessment Report

Client Name: MLROBUST

Generated on: 2025/5/26 09:40:06

Model Profiles:

1. Attack type: Privacy Attack
2. Data Modality: ALL
3. Tasks: ALL
4. Learning Architecture: ALL
5. Model Architecture: ALL
6. Knowledge: ALL
7. Application Domains: ALL

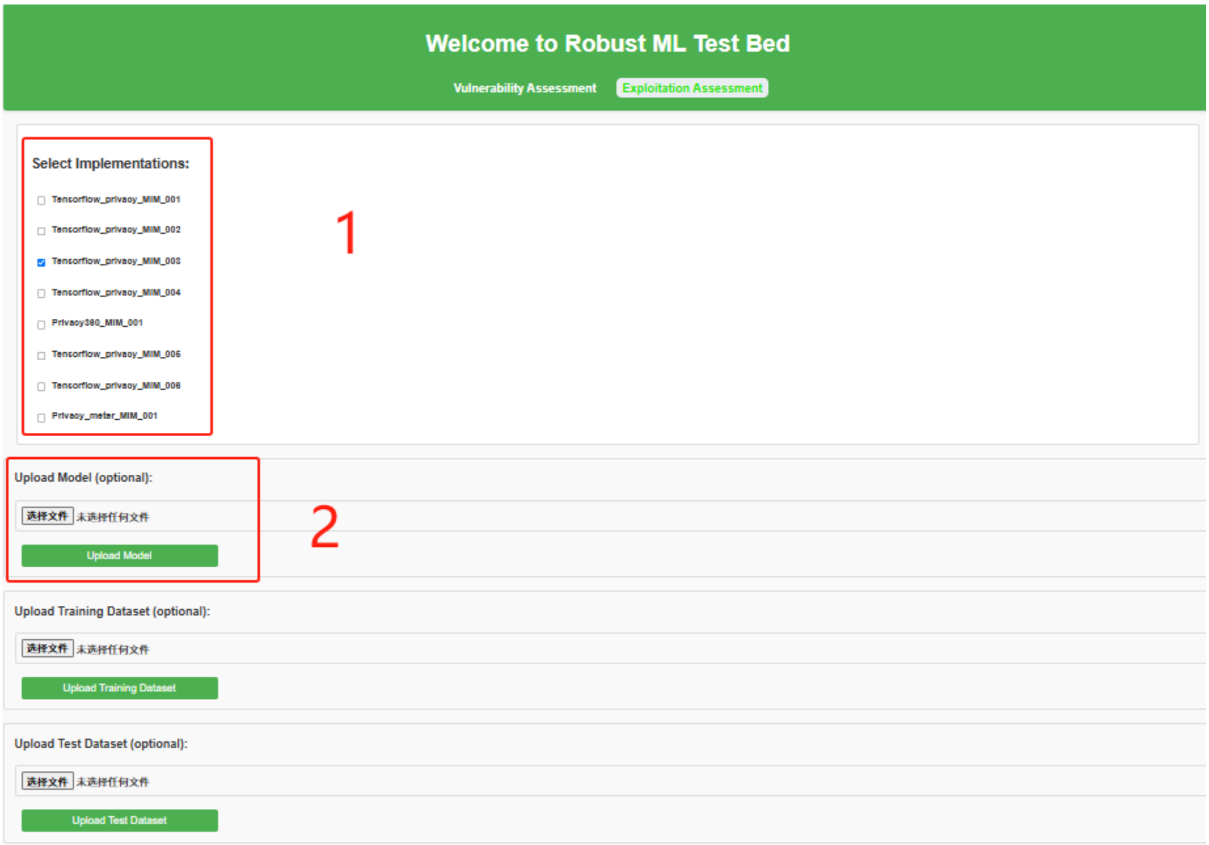
Assessment Results:

The results of vulnerability assessment:
Selected Attack Type: Privacy Attack

1. A_Reconstruction_001: Stochastic Gradient Descent with Trap Weights
2. A_Reconstruction_002: Leakage from Gradient
3. A_Reconstruction_003: Leakage from Gradient
4. A_Membership_inference_001: Membership inference attack
5. A_Membership_inference_002: Extracting training data from large language models
6. A_Membership_inference_003: Scalable extraction of training data from (production) language models
7. A_Property_Inference_Attack_001: Active and passive Proferty inference attack
8. A_Membership_inference_004: Shadow Model-based attacks
9. A_Membership_inference_005: Reference Model-based Attack
10. A_Membership_inference_006: Stochastic Gradient Descent-based Attack

Step 6: Click the “Exploitation Assessment” button, then go to the further analysis page.

4. At the Exploitation Assessment Page:



Select Implementations:

- □ Tensorflow_privacy_MIM_001
- □ Tensorflow_privacy_MIM_002
- ☑ Tensorflow_privacy_MIM_003
- □ Tensorflow_privacy_MIM_004
- □ Privacy380_MIM_001
- □ Tensorflow_privacy_MIM_006
- □ Tensorflow_privacy_MIM_008
- □ Privacy_meter_MIM_001

Upload Model (optional): 选择文件 未选择任何文件

Upload Training Dataset (optional): 选择文件 未选择任何文件

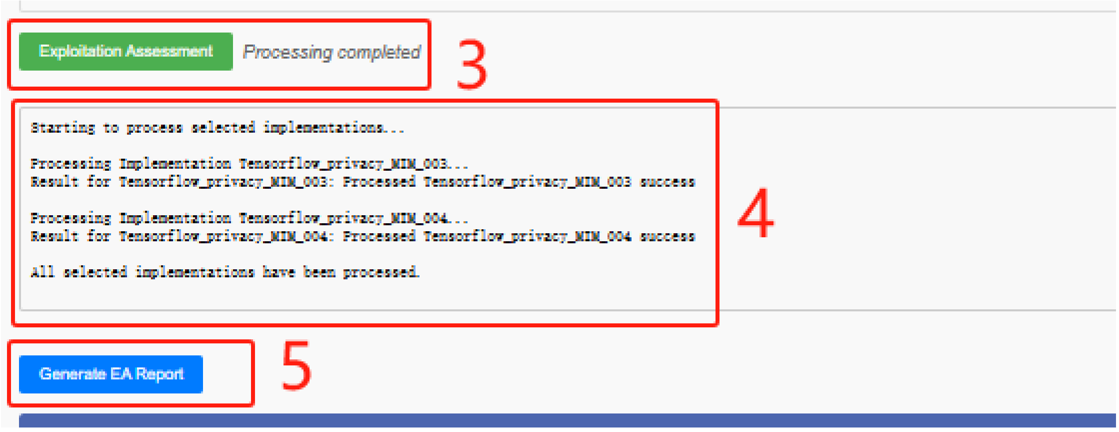
Upload Test Dataset (optional): 选择文件 未选择任何文件

Step 1: Select implementation in this area (you can choose one or more options)

Step 2: Select the upload model from the libraries following the requirements below

Attack types	**Implementation ID**	**Model**
Privacy Attack	Tensorflow_privacy_	Tensorflow_privacy_model.h5
	Privacy_meter_	Privacy_meter_model.h5
Evasion Attack	ART_EA_	Evasion_model.pt
Poison Attack	ART_PA_	**No need to upload the model**

Note: As for the present, there is no need to upload the datasets.



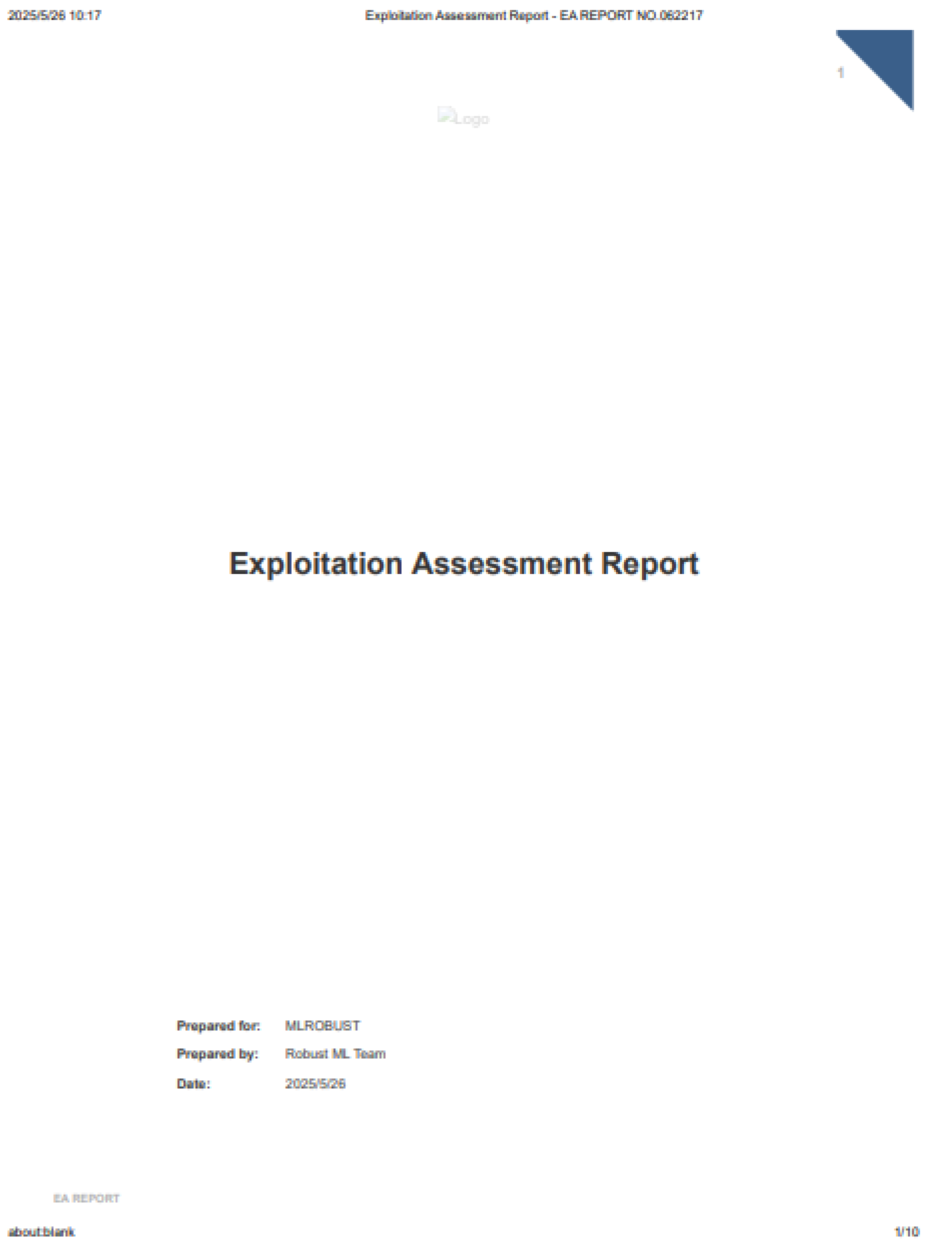
Processing completed

```
Starting to process selected implementations...

Processing Implementation Tensorflow_privacy_MIM_003...
Result for Tensorflow_privacy_MIM_003: Processed Tensorflow_privacy_MIM_003 success

Processing Implementation Tensorflow_privacy_MIM_004...
Result for Tensorflow_privacy_MIM_004: Processed Tensorflow_privacy_MIM_004 success

All selected implementations have been processed.
```

Step 3: Click the “Exploitation Assessment” button, then the testbed will start analyzing

Step 4: Wait for a while, and Area 4 will state what is processing.

Step 5: If the information indicates “All selected implementations have been processed”, then you can click the “Generate EA Report” button and get a final report as follows.



2025/5/26 10:17 Exploitation Assessment Report - EA REPORT NO.062217

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Logo

Exploitation Assessment Report

Prepared for:	MLROBUST
Prepared by:	Robust ML Team
Date:	2025/5/26

EA REPORT

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