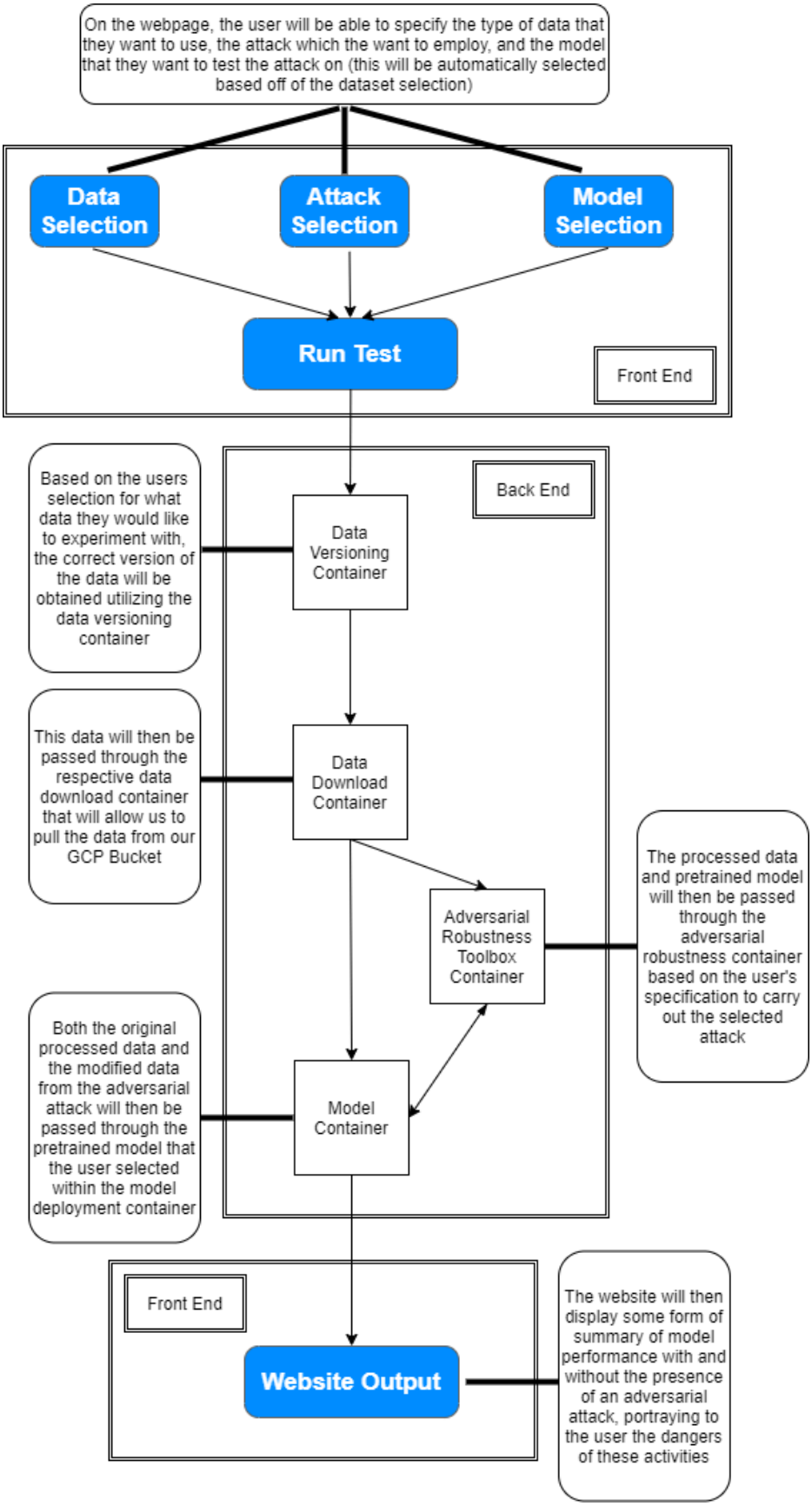
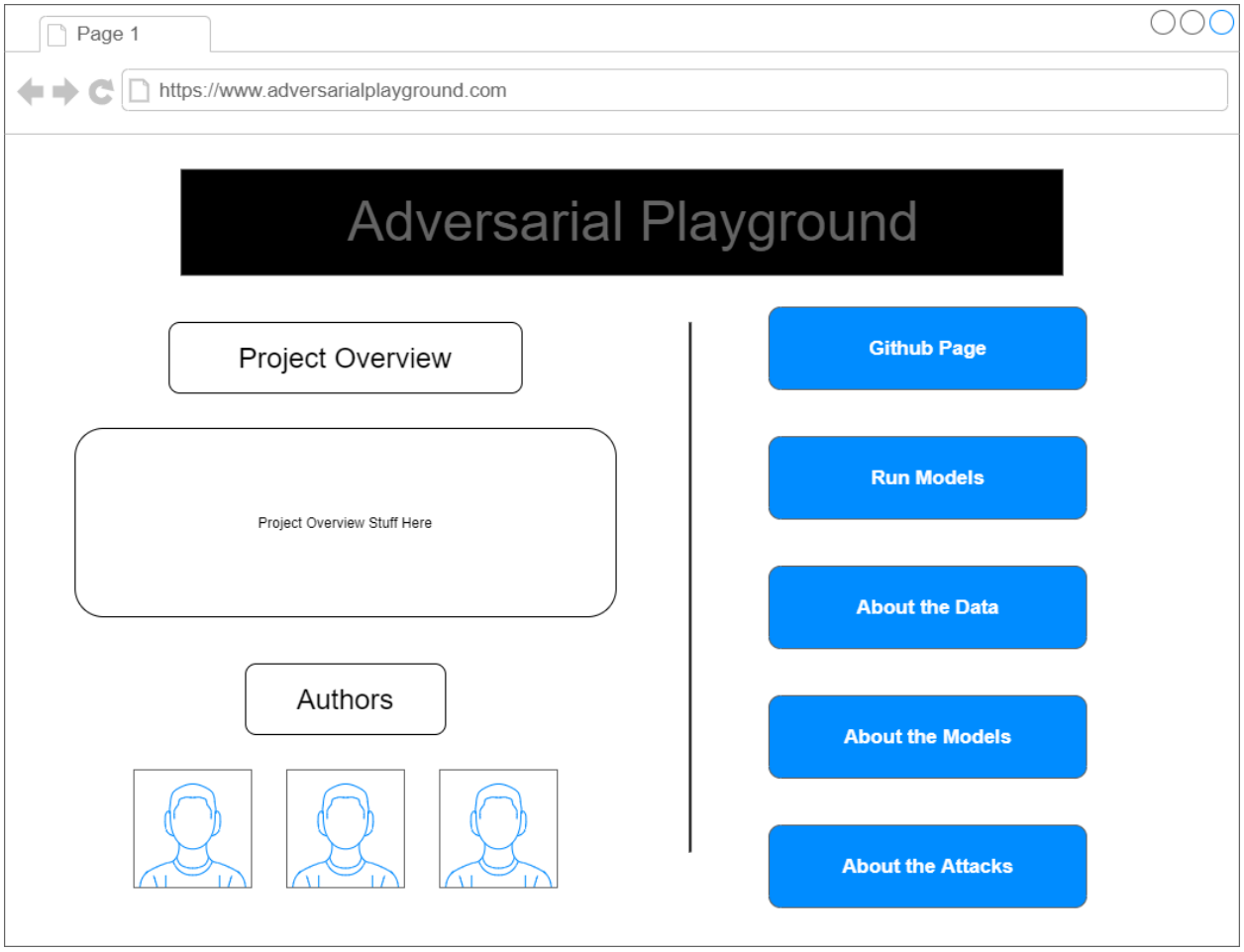
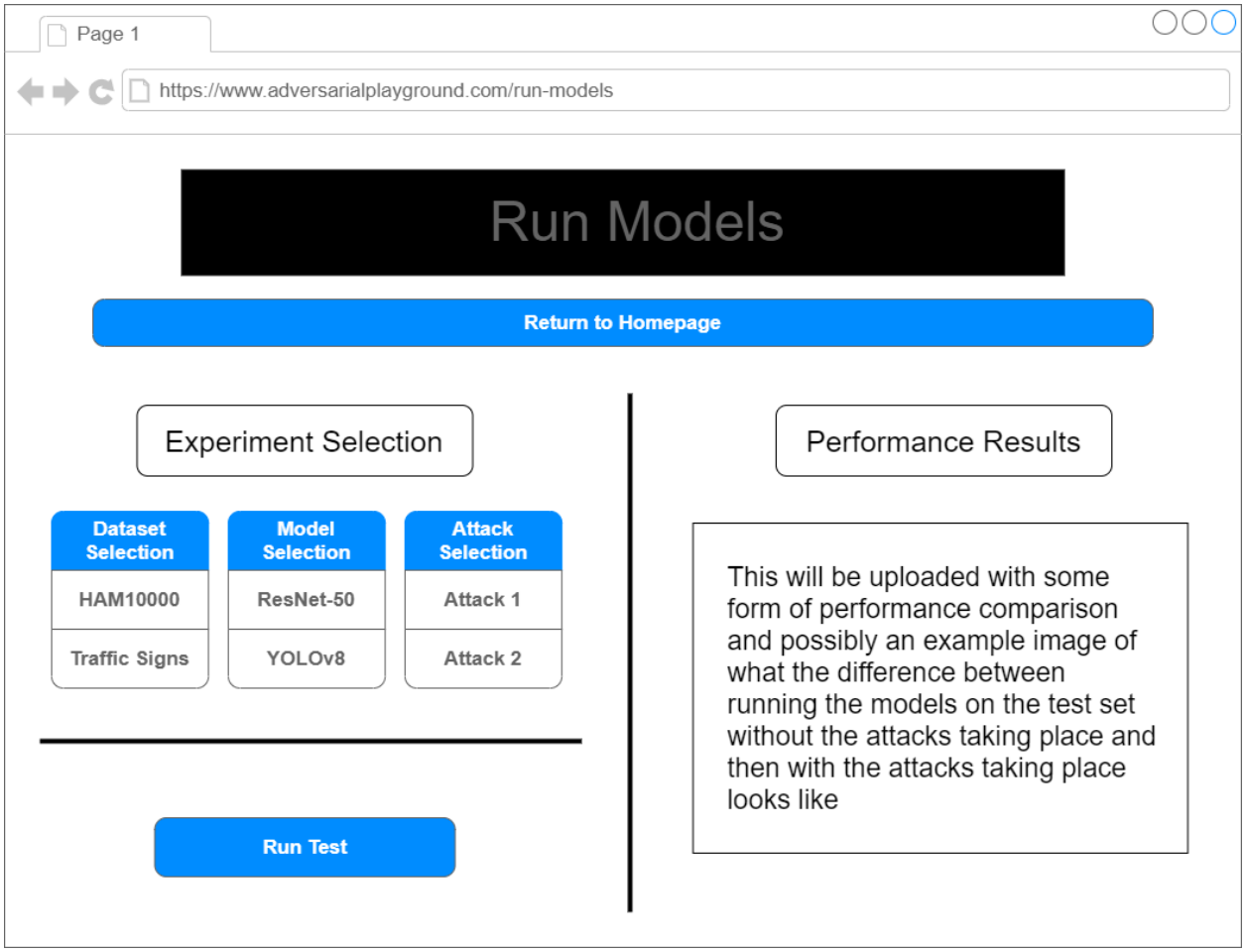
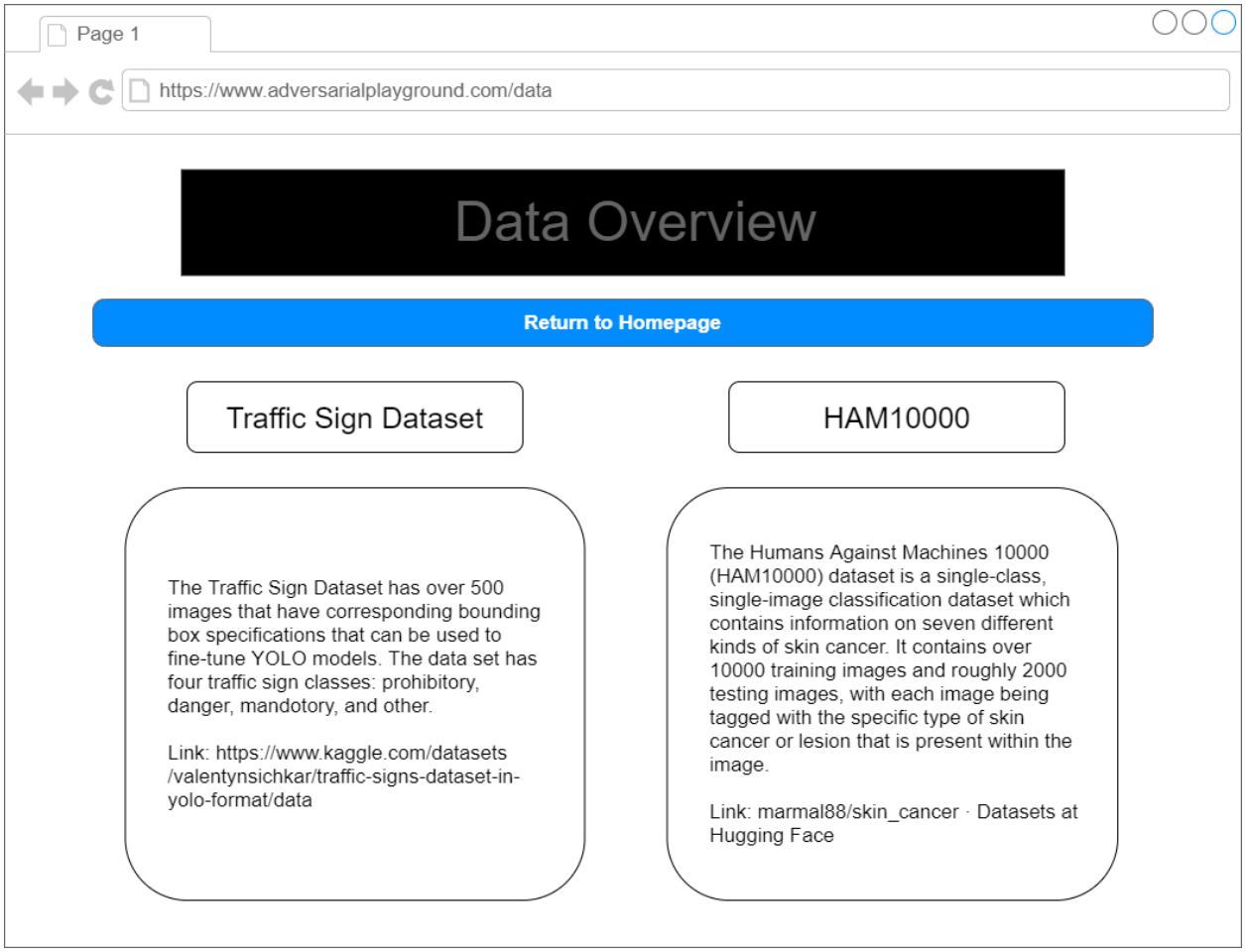
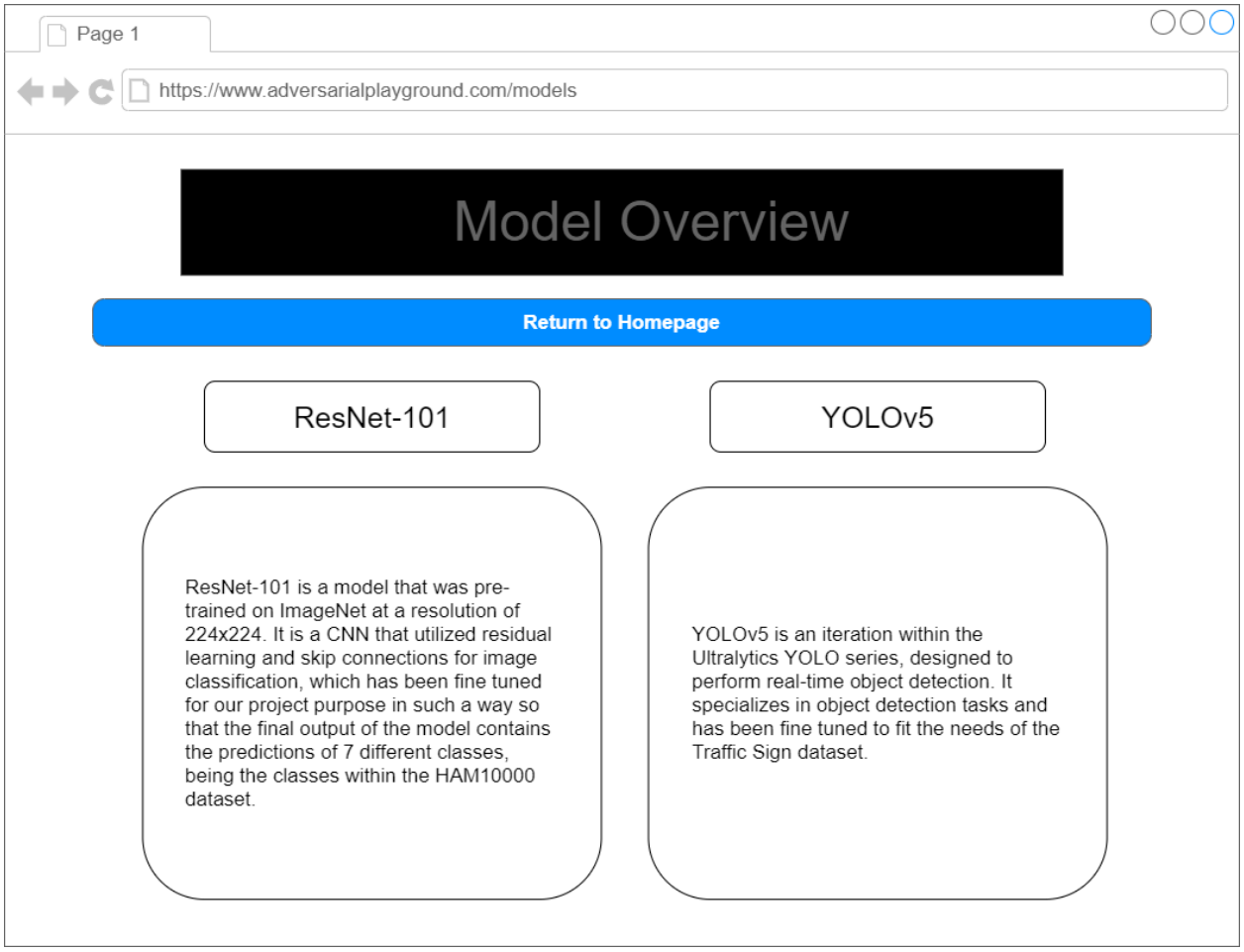
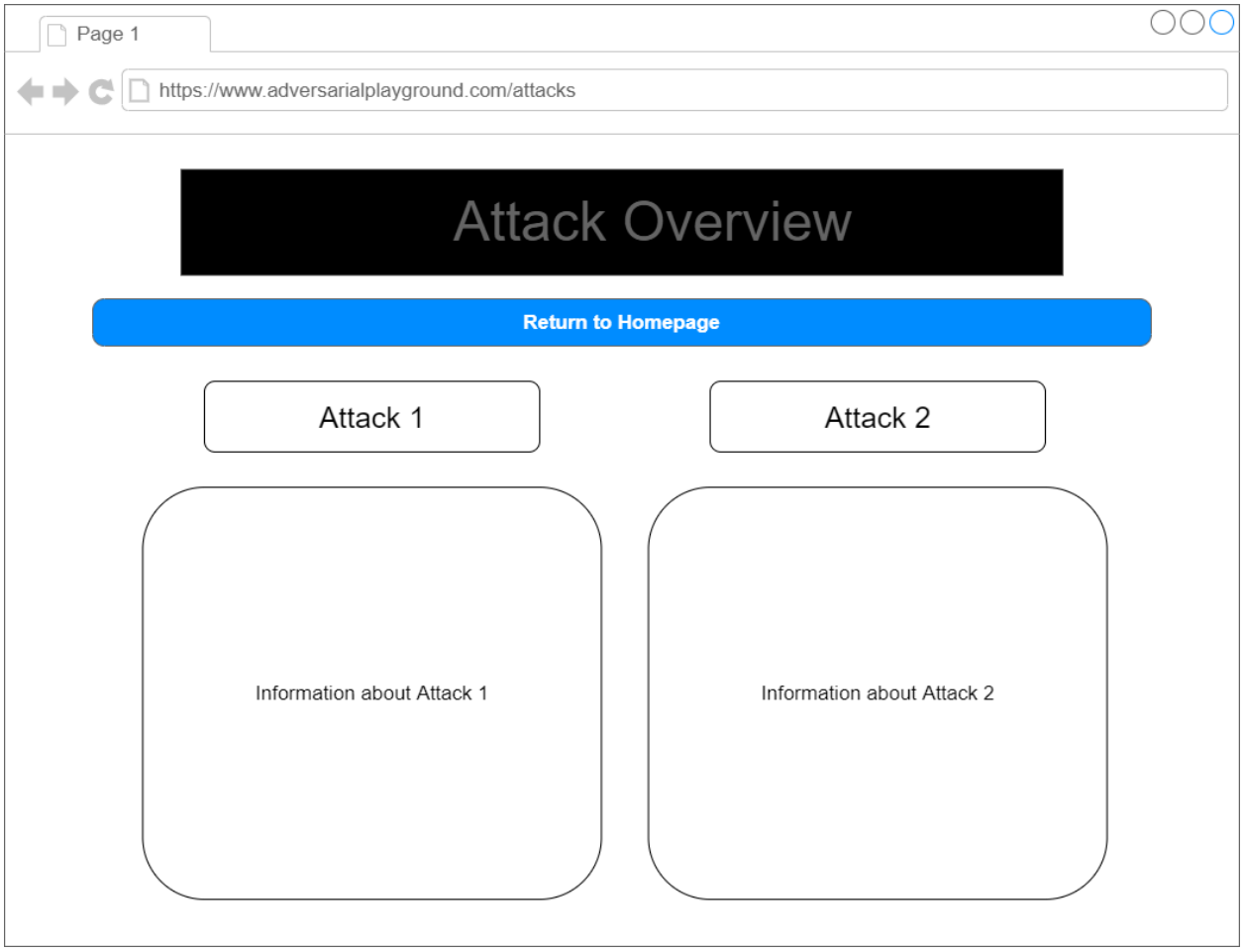

On the webpage, the user will be able to specify the type of data that they want to use, the attack which the want to employ, and the model that they want to test the attack on (this will be automatically selected based off of the dataset selection)
Data Selection
Attack Selection
Model Selection
Run Test
Front End
Back End
Based on the users selection for what data they would like to experiment with, the correct version of the data will be obtained utilizing the data versioning container
Data Versioning Container
This data will then be passed through the respective data download container that will allow us to pull the data from our GCP Bucket
Data Download Container
Adversarial Robustness Toolbox Container
The processed data and pretrained model will then be passed through the adversarial robustness container based on the user's specification to carry out the selected attack
Both the original processed data and the modified data from the adversarial attack will then be passed through the pretrained model that the user selected within the model deployment container
Model Container
Front End
Website Output
The website will then display some form of summary of model performance with and without the presence of an adversarial attack, portraying to the user the dangers of these activities


Page 1
https://www.adversarialplayground.com
Adversarial Playground
Project Overview
Project Overview Stuff Here
Authors
Github Page
Run Models
About the Data
About the Models
About the Attacks


Page 1
https://www.adversarialplayground.com/run-models
Run Models
Return to Homepage
Experiment Selection
Performance Results
Dataset Selection
Model Selection
Attack Selection
HAM10000
ResNet-50
Attack 1
Traffic Signs
YOLOv8
Attack 2
Run Test
This will be uploaded with some form of performance comparison and possibly an example image of what the difference between running the models on the test set without the attacks taking place and then with the attacks taking place looks like


Page 1
https://www.adversarialplayground.com/data
Data Overview
Return to Homepage
Traffic Sign Dataset
HAM10000
The Traffic Sign Dataset has over 500 images that have corresponding bounding box specifications that can be used to fine-tune YOLO models. The data set has four traffic sign classes: prohibitory, danger, mandotory, and other.
Link: https://www.kaggle.com/datasets /valentynsichkar/traffic-signs-dataset-in-yolo-format/data
The Humans Against Machines 10000 (HAM10000) dataset is a single-class, single-image classification dataset which contains information on seven different kinds of skin cancer. It contains over 10000 training images and roughly 2000 testing images, with each image being tagged with the specific type of skin cancer or lesion that is present within the image.
Link: marmal88/skin_cancer · Datasets at Hugging Face


Page 1
https://www.adversarialplayground.com/models
Model Overview
Return to Homepage
ResNet-101
YOLOv5
ResNet-101 is a model that was pre-trained on ImageNet at a resolution of 224x224. It is a CNN that utilized residual learning and skip connections for image classification, which has been fine tuned for our project purpose in such a way so that the final output of the model contains the predictions of 7 different classes, being the classes within the HAM10000 dataset.
YOLOv5 is an iteration within the Ultralytics YOLO series, designed to perform real-time object detection. It specializes in object detection tasks and has been fine tuned to fit the needs of the Traffic Sign dataset.


Page 1
https://www.adversarialplayground.com/attacks
Attack Overview
Return to Homepage
Attack 1
Attack 2
Information about Attack 1
Information about Attack 2