Lab Activity: Introduction to Machine Learning with Teachable Machine

Objective

The objective of this lab is to help you understand the basic machine learning workflow by defining a problem, preparing data, training a model, testing it, and identifying the type of machine learning task.

Task 1: Define Your Machine Learning Problem

Before training your model, clearly define the problem you want to solve.

Answer the following questions:

1. **What is your problem?**
   Describe what you want the machine learning model to do.
2. **What is the input to your model?**
3. **What output do you expect from the model?**
4. **Describe how you prepare your data.**

Then, Train your model using **Teachable Machine**.

Task 2: Identify Your Machine Learning Task

After training your model, answer the following questions.

1. **Is your task supervised learning or unsupervised learning? Why?**
2. **Is your problem a classification problem or a regression problem? Why?**

Task 3: Test Your Model

Test your trained model using at least **5 new examples**.

Do not use exactly the same examples that were used during training.

Record the following for each test:

- Actual class
- Predicted class
- Whether the prediction is correct or incorrect

Then calculate your model accuracy:

Accuracy = (Number of Correct Predictions / Total Number of Tests) × 100

Model Accuracy: _____ %

Task 3: Discussion

Answer the following questions.

1. Did your model correctly classify all new examples? Why or why not?
2. What factors affected the performance of your model?
3. What could you change in your training data to improve your model?

Submission

Submit a short report answering the questions above and screenshot of your trained Teachable Machine model.