

Build Your First AI Project

Student Self-Training Guide · Grade 8+ · Module 8 of 10

1. Project: Fruit Classifier

In this project you will build an AI that can identify whether a fruit is an apple or a banana from a photo — using Google's free Teachable Machine tool. No coding required!

2. What You Need

- A laptop or desktop computer with a camera.
- A Google account (free).
- A few apples and bananas (or printed photos of them).
- Internet connection.

3. Step-by-Step Instructions

1. Open your browser. Go to: teachablemachine.withgoogle.com
2. Click "Get Started" ! Choose "Image Project" ! "Standard Image Model".
3. Rename "Class 1" to "Apple" and "Class 2" to "Banana".
4. Hold an apple in front of your camera and click "Hold to Record" — capture 50 photos.
5. Do the same for banana — capture 50 photos.
6. Click "Train Model" — wait 1-2 minutes.
7. Under "Preview", hold up an apple or banana and watch the AI predict!
8. Click "Export Model" ! "Upload (shareable link)" — share with your class.

4. What is Happening Behind the Scenes?

- Teachable Machine is using a CNN (Convolutional Neural Network).
- It analyses pixels in your photos to find patterns.
- Apple patterns: round shape, red/green colour.
- Banana patterns: curved shape, yellow colour.
- When you show a new image, it matches against learned patterns and predicts.

5. Extend the Project

- Add a third class: "Orange". Retrain and test accuracy.
- Try with other objects (pen vs pencil, shoes vs sandals).
- What happens if your training photos are too similar or too few?

6. Reflection Questions

- What was your model's accuracy? (Check "Under Preview" percentages).
- When did it get confused? Why do you think it made mistakes?
- How would you improve it with more or better data?

