



Prize Winner

Programming, Apps & Robotics Year 3-4

Chiara Kaushik

Burnside Primary School





PictoBlox File Edit Tutorials Board Connect Chiara_Oliphant_v2 Mode Stage Upload

Blocks Python Comments Sounds

Search: take stage snapshot

Sound

- play sound: sound → until done
- start sound: sound →
- stop all sounds
- change pitch: effect by: 10
- set pitch: effect by: 100
- clear sound effects
- change volume by: 10
- set volume to: 100 %
- volume

Events

Script:

- when green flag clicked
- open recognition window
- is identified class from web camera → in: good banana → play sound: recording1 → until done
- is identified class from web camera → in: bad banana → play sound: recording2 → until done
- is identified class from web camera → in: good apple → play sound: recording3 → until done
- is identified class from web camera → in: bad apple → play sound: recording4 → until done

Sprite: Chiara_Oliphant_v2

Stage

Backdrop: 100% opacity

10:05 AM 26/07/2023

Fruit Health Detector

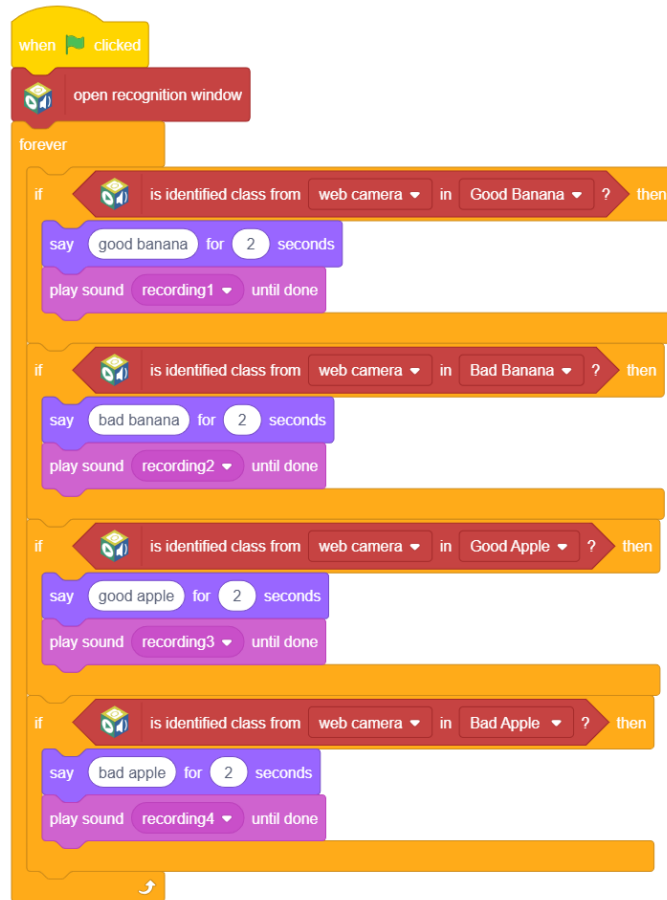
By Chiara Kaushik, Year 3 – Burnside Primary School

1. Project Overview

I built a simple program that can tell if a banana or an apple is good or bad. The program uses a webcam to look at the fruit and then says out loud “good banana,” “bad banana,” “good apple,” or “bad apple.” It helps people who cannot see well.

2. Tools and Data

- **Fruit Images:** I used an open-source library of fruit pictures from Kaggle. It has many photos of good and bad bananas and apples. It can be found here: <https://www.kaggle.com/datasets/ryandpark/fruit-quality-classification>
- **Teachable Machine:** I trained a model with thousands of these pictures. I made four groups: good banana, bad banana, good apple, bad apple.
- **PictoBlox:** I used this block-coding software to load my model from a web link. PictoBlox’s machine-learning blocks helped me connect the model to my program.



3. How It Works

1. The webcam shows a fruit in front of the computer.
2. The model looks at the picture and decides which group the fruit belongs to.
3. The program speaks the result through the computer's speaker.

4. Results

- The detector was right more than 95 out of 100 times in my tests.
- It spoke the result clearly so anyone can hear what the model sees.

5. Impact and Future Ideas

- This tool can help people who are visually impaired choose fresh fruit safely.
- In the future, I want to add more fruits like grapes and oranges.
- I also plan to make a phone app so people can use it on the go.

6. Conclusion

This project combines easy-to-use tools with smart learning to solve a real problem. I had fun learning about machine learning and coding. My father helped in searching for fruit database and in using Teachable Machine. Thereafter, I did the coding part myself. I hope it helps many people pick good fruit every day.