Teachable Machines

Teachable Machine is a **web-based tool** that empowers users to create **machine learning models** without requiring any coding expertise. It's designed to be **fast, easy, and accessible** for everyone. Here's how it works:

1. **Gather**: You start by **grouping examples** into different classes or categories. These examples represent what you want the computer to learn. You can use images, sounds, or poses. For instance, if you're teaching it to recognize ripe bananas, you'd gather images of both ripe and unripe bananas.

2. **Train**: Next, you **train your model** using the examples you've gathered. The tool uses **transfer learning**, an ML technique, to find patterns and trends within the data. It then creates a simple classification model in seconds. You can instantly test the model to see if it correctly classifies new examples.

3. **Export**: Once your model is trained, you can **export it** for use in your projects— whether it's for websites, apps, or other applications. You can download the model or host it online.

What can you teach it?

- **Images**: Teach a model to classify images using files or your webcam.
- **Sounds**: Train a model to classify audio by recording short sound samples.
- **Poses**: Create a model that recognizes body positions using files or webcam poses.

Examples:

- **Bananameter**: Learn how to create a model that determines whether a banana is ripe or not.
- **Snap Clap Whistle**: Create a model that detects simple sounds you make.
- **Head Tilt**: Recognize which way you're tilting your head.

Made with Teachable Machine: Check out more experiments created using Teachable Machine. If you've made something you'd like to share, you can submit it here or email teachablemachine—support@google.com.

The models you create with Teachable Machine are real **TensorFlow.js models** that work anywhere JavaScript runs. They play nicely with tools like Glitch, P5.js, Node.js, and more. Plus, you can export them to different formats for use elsewhere, such as Coral and Arduino.

Whether you're exploring AI ethics, creating interactive systems, or simply learning about machine learning, Teachable Machine provides an accessible entry point for all levels of users. Give it a try! 🚀🔧

Source: Conversation with Bing, 2/29/2024 (1) Teachable Machine. https://teachablemachine.withgoogle.com/. (2) 2020_CHI_LBW_Teachable_Machine.pdf - Noura Howell. https://nourahowell.com/static/pdf/2020_CHI_LBW_Teachable_Machine.pdf. (3) An introduction to Teachable Machine — AI for dummies. https://blog.etereo.io/an-introduction-to-teachable-machine-ai-for-dummies-61d1f97f5cf. (4) Teachable Machine - AI Educator Tools.

https://aieducator.tools/tool/https_teachablemachine_withgoogle_com. (5) Teachable Machine. http://teachablemachine.withgoogle.com/faq.