

LESSON 3

See How AI Learns: Train a Pose Model

40 minutes

How Machines Learn

WHAT THIS LESSON DOES

Students train and test a pose-recognition model from their own body positions, then examine how the quality and balance of training examples shape what the model does-and what that means for the AI behind everyday media.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Students train, test and improve a pose model from their own examples; they explain how the quality and balance of training data shape model behaviour, including unfair outcomes, and connect this to AI in everyday media.

BEFORE THE BELL

- Devices with a working webcam and a modern browser; Teachable Machine runs in the browser with no accounts or sign-ins required.
- Check webcam permissions and seating so students can tilt clearly in frame (pairs sharing one device is fine).
- Interactive whiteboard or shared screen ready if you want to model the first class whole-class before pairs work independently.
- Agree how students will save the exported model link the class way (e.g. shared note, folder, or email to self).

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HOW THE LESSON RUNS

4 min	introduction	Start: What We're Exploring
2 min	content	Introduction
2 min	content	Open Teachable Machine
3 min	content	Create a Pose Project
2 min	content	Create the Classes
6 min	content	Add Images to the Tilt Left Class
2 min	content	Add Images to the Tilt Right Class
2 min	content	Add Images to the No Tilt Class
3 min	content	Train the Model
2 min	content	Test the Model
4 min	content	Export Your Model
2 min	content	Conclusion
3 min	content	Make Sense: What Did the Model Learn?
2 min	content	Reflect
1 min	summary	What You Covered

TEACHING MOVES

- Model one clear class on the board first (e.g. Tilt Left): same pose, varied faces in frame, then remove blurry or off-pose shots so students see that sample quality matters.
- Keep class names consistent (Tilt Left, Tilt Right, No Tilt) so later reuse of the model stays straightforward.
- When testing, ask pairs to try edge cases (half-tilt, standing vs sitting, different students) and notice confidence bars, not only "right/wrong".
- If time allows, deliberately unbalance one class (far fewer or messier samples) and retrain once so the fairness point is seen, not only told.

WHAT TO WATCH FOR

- Blurry, partial, or mixed-pose samples in a class, pause and delete weak images before training; remind them the model learns exactly what it is shown.
- Very uneven sample counts across classes, aim for roughly similar numbers; if one pose always wins, add samples to the weaker classes and retrain.
- Testing only the person who trained, swap who is in front of the webcam; if accuracy drops, discuss representation in the training set.

DIFFERENTIATION

- Support: Pair students; provide a simple sample checklist (clear tilt, full upper body, steady hold) and allow one student to pose while the other records.
- Extension: Challenge pairs to bias the set on purpose (e.g. only one body type or only slight tilts), retrain, and report who the model now fails for.
- Extension: Link confidence failures to a real media example (recommendation, filter, or moderation) in the make-sense or reflect discussion.