LESSON 50

See how AI learns: train a pose model

40 minutes | Publishing Online | Built in Teachable Machine | Outcome 4.6

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.

CURRICULUM OUTCOMES

Outcome	What the specification asks for
4.6	Debate the advantages and disadvantages of new and emerging technologies, including AI.

WHAT STUDENTS SHOULD BE ABLE TO DO

- reuse: platform Teachable Machine Part 2 of 2 (codesite 9139)
- Train, test and improve a pose-recognition model from your own body positions (LO 4.6)
- Explain how the quality and balance of training data shapes what any AI model does, including unfair outcomes

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).

WHAT YOU NEED

Item	Qty	Per	If you do not have it
tablet or laptop with Teachable Machine	1	pair	run the lesson on the IWB with students taking turns

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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.