Vision Model Tests

Test Footage Criteria:

Start with no person in frame.

Walk in frame then hold each pose for 3.5 seconds each. The poses are: Casual standing; T-pose forward, back, left and right; step left, step right; Arms together outwards left, right; leg up left and right; arms folded forward and back; kneeling with arms behind back.

Also jump left and right for manual picture taking to test how that handles movement.

Test wearing clothes that cover arms and legs, wearing clothes that don't.

Make sure each recording also involves time in between poses where subject is moving.

Test in following locations:

Inside: Matte wall, in room, in dark room, with light bulb in frame

Outside: Against wall, in open area, with landscape in background, with sea in background, with plants behind.

Reasons for each test criteria:

Casual standing: basic pose for reference

T-pose: classic pose and easy shape for reference. Great for testing every angle.

Steps: allows for a segmented pose with outline of legs and arms for a more complicated shape

Arms together: sees how model handles overlapping body parts

Arms folded: Body tucked into body, not as strong of outline

Kneeling: Tucks in both legs and arms

Jump: Tests movement and manual capture

Covering arms and legs vs not: Tests how clothes and exposed skin affects model

Movement time: To test that the model isn't too sensitive and takes frames even while moving.

Inside: Likely recording location and easier to control elements

Outside: Elements like lighting, clouds, wind, etc. are harder to control

Matte Wall: Control setting, ideal environment

In dark room: Sees how lack of light affects pose detection and background removal

Light bulb in frame: Tests how model handles glare

Against wall: Most control outside

Open Area: Tests how background removal not against a wall

Landscape: Lots of background elements but far away, sees how it handles multiple small movements

Sea: Constant small movements, variations and reflections that could mess with model

Plants: Lots of background movement in wind so might confuse model

Each will be tested for pose detection and background removal. They will be rated 1 to 10 on both. Pose detection will be rated based on: speed of detection, number of correct detections, number of missed detections, number of false detections. Background removal will be rated based on: clean outlines, if there is any background remaining, if there is anything removed that shouldn't.

Inside

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	Yes
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	No

Inside Short Clothes

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	Yes
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	No

Dark Room

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	No
T-Pose Left	No
T-Pose Right	No
Step Left	Yes
Step Right	Yes

Arms Together In Left	No
Arms Together Out Left	No
Arms Together In Right	No
Arms Together Out Right	No
Arms Folded Forward	Yes
Arms Folded Backwards	No
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	Yes: 7 times between poses

Dark Room Short Clothes

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	No
Step Left	Yes
Step Right	Yes
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	Yes: 8 times between poses

Light Bulb

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	Yes
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	No

Light Bulb Short Clothes

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	Yes
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	No

Against Door

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	Yes
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	No

Against Door Short Clothes

Pose	Did it detect?
Casual	No
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	No
T-Pose Right	No
Step Left	Yes
Step Right	Yes

Arms Together In Left	No
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	No

Open Area

Pose	Did it detect?
Casual	Yes
T-Pose Forward	No
T-Pose Backward	Yes
T-Pose Left	No
T-Pose Right	Yes
Step Left	No
Step Right	Yes
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	No

Open Area Short Clothes

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	No
Arms Together In Left	Yes
Arms Together Out Left	No
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	No
Extra?	Yes: At end while unravelling trouser leg

Landscape

Pose	Did it detect?
Casual	Yes
T-Pose Forward	No
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	No
Step Right	No
Arms Together In Left	Yes
Arms Together Out Left	No
Arms Together In Right	Yes
Arms Together Out Right	No
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	No

Landscape Short Clothes

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	Yes
Arms Together In Left	Yes
Arms Together Out Left	No
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	Yes
Extra?	No

Landscape Far

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	Yes

Pose	Did it detect?
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	No
Balance Right	Yes
Extra?	No

Landscape Far Short Clothes

Pose	Did it detect?
Casual	No
T-Pose Forward	No
T-Pose Backward	No
T-Pose Left	No
T-Pose Right	No
Step Left	No
Step Right	No
Arms Together In Left	No
Arms Together Out Left	No
Arms Together In Right	No
Arms Together Out Right	No
Arms Folded Forward	No
Arms Folded Backwards	No
Kneeling	No
Balance Left	No
Balance Right	No
Extra?	No

Sea

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	No
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	Yes
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	No
Balance Right	Yes
Extra?	No

Sea Short Clothes

Pose	Did it detect?
Casual	Yes
T-Pose Forward	Yes
T-Pose Backward	No
T-Pose Left	Yes
T-Pose Right	Yes
Step Left	Yes
Step Right	Yes
Arms Together In Left	No
Arms Together Out Left	No
Arms Together In Right	No
Arms Together Out Right	Yes
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	No
Balance Right	No
Extra?	No

Plants

Pose	Did it detect?
Casual	No
T-Pose Forward	No
T-Pose Backward	Yes
T-Pose Left	Yes
T-Pose Right	No
Step Left	No
Step Right	No
Arms Together In Left	Yes
Arms Together Out Left	Yes
Arms Together In Right	Yes
Arms Together Out Right	No
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	Yes
Balance Left	Yes
Balance Right	No
Extra?	No

Plants Short Clothes

Pose	Did it detect?
Casual	No
T-Pose Forward	Yes
T-Pose Backward	No
T-Pose Left	No
T-Pose Right	Yes
Step Left	Yes
Step Right	No

Arms Together In Left	No
Arms Together Out Left	No
Arms Together In Right	No
Arms Together Out Right	No
Arms Folded Forward	Yes
Arms Folded Backwards	Yes
Kneeling	No
Balance Left	No
Balance Right	No
Extra?	No

Background	Outfit	Wind	Extra	Pose Detection	Background Removal	Notes	Example
Inside	Long	None		10/10	7/10	Extra subtraction needed	
Inside	Short	None		10/10	8/10	Extra subtraction needed (not as much as long)	
Dark Room	Long	None	Only light is monitor glow	3/10	2/10	Too much subtraction and poor outline. Pose landmarker struggled to recognise person.	
Dark Room	Short	None	Only light is monitor glow	5/10	3/10	Too much subtraction and poor outline. Pose landmarker struggled to recognise person.	
Light Bulb	Long	None	Bottom cut off to get light bulb in frame	10/10	8/10	Needs more subtraction	
Light Bulb	Short	None	Bottom cut off to get light bulb in frame	10/10	8/10	Needs more subtraction	
Against Door	Long	Low		10/10	9/10	Needs a bit more subtraction in some images	

Against Door	Short	Low	Passerbys	8/10	9/10	Needs a bit more subtraction. Sun flicker messed with detection.	
Open Area	Long	Mild	Bird	8/10	9/10	Needs a bit more subtraction. Wind stopped certain pose detections.	
Open Area	Short	Mild	Passerbys	9/10	9/10	Wind stopped certain detections.	
Landscape	Long	Mild		8/10	9/10		
Landscape	Short	Mild		8/10	8/10		
Landscape Far	Long	Mild		9/10	8/10		
Landscape Far	Short	Mild		0/10	1/10	Too far for person to be detected in frame by pose landmarker	
Sea	Long	Strong		9/10	9/10	Needs a little more background subtraction. Sun glare causes problems.	

Sea	Short	Strong	7/10	10/10	Near perfect background subtraction. Wind caused pose detection problems.	
Plants	Long	Mild	6/10	7/10	Too much sun glare for good cutout. Wind stopped some pose detections.	
Plants	Short	Mild	3/10	7/10	Too much sun glare for good cutout. Wind stopped pose detections. Plants not responsible for poor pose detection this time. Can tell by mask it is due to the wind.	