**Week 4 Quiz**

1 What HTML5 tag is used to show the contents of a webcam?

<pre>

<webcam>

<div>

<video>

2. If I initialize a webcam object like this:

const webcam = new Webcam(document.getElementById('wc'));

Which code will then start the webcam feed to render in the page?

 async function init(){await webcam.go();}async function init(){await webcam.go

  ();}

 async function init(){await webcam.initialize();}

 async function init(){await webcam.setup();}

 async function init(){await webcam.start();}

3. If I want to create a model that uses transfer learning, with everything in mobilenet up to layer ‘foo’, and my layers afterwards, how do I do it? Assume this code was used to find layer ‘foo’

const layer = mobilenet.getLayer('foo');

 return tf.model({inputs: mobilenet.inputs, outputs: layer.output});

 return tf.model({inputs: mobilenet.input, outputs: layer.outputs});

 return tf.model({inputs: mobilenet.inputs, outputs: layer.outputs});

 return tf.model({inputs: mobilenet, outputs: layer});

4. If I am transfer learning from a mobilenet, and I want to use my own dense layers after the mobilenet ones, what is the correct syntax to use at <INSERT CODE HERE>

model = tf.sequential({

layers: [

tf.layers.flatten(<INSERT CODE HERE>),

tf.layers.dense({ units: 100, activation: 'relu'}),

tf.layers.dense({ units: 3, activation: 'softmax'})

]

});

{inputShape: mobilenet.outputs[0].slice(1)}

{inputShape: mobilenet.outputs[1].shape.slice(0)}

{inputShape: mobilenet.outputs[1].slice(0)}

{inputShape: mobilenet.outputs[0].shape.slice(1)}

5. If I am using a mobilenet with my own DNN for transfer learning in TensorFLow.js, how do I get a prediction for an image?

Get a set of prediction embeddings from mobilenet and pass them to your model

Just pass the prediction to your own model, it already includes the mobilenet layers

Get a set of prediction embeddings from your model and pass them to mobilenet

Just pass the prediction to mobilenet, because you’ve already added your layers to it

6. If you have a set of predictions returned from model.predict(something) and you want to take the one with the largest probability, how do you do it?

predictions.sort() then look at the 0th element

predictions.as1D().argMax(), then look at the 0th element

predictions.argMax() then look at the 0th element

predictions[0] contains the one with the largest probability

7. If you already have a function called predict() in a class called ‘foo’ which captures a frame from the webcam and predicts it, what’s the best way to call it, particularly if you plan to do continuous predictions?

 foo.predict(); tf.tidy();

 tf.tidy(() => foo.predict());

 tf.tidy(foo.predict());

 foo.predict(tf.tidy());

8. Why is transfer learning a huge advantage, particularly when training in the browser?

It allows you to use already-learned convolutions for distinguishing features, saving training time

It gives you a smaller model

It lets you skip training altogether

It allows you to use already-learned convolutions for distinguishing features, saving space