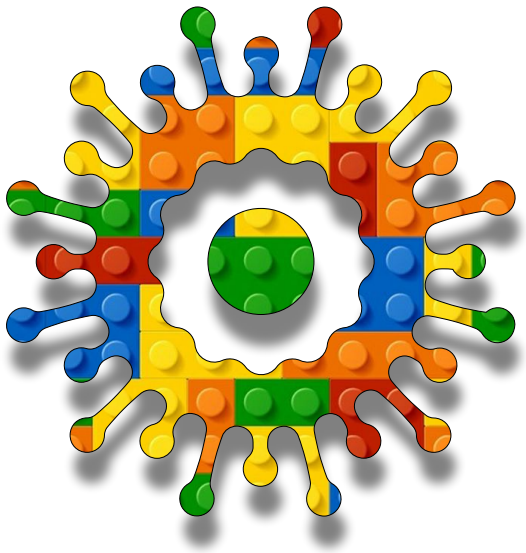
Algorithmic Intelligence Module C Unit #3 transformer depth analysis



Module C Unit #3 transformer depth analysis

Sketch C3.1 the code

Introduction to transformer depth analysis

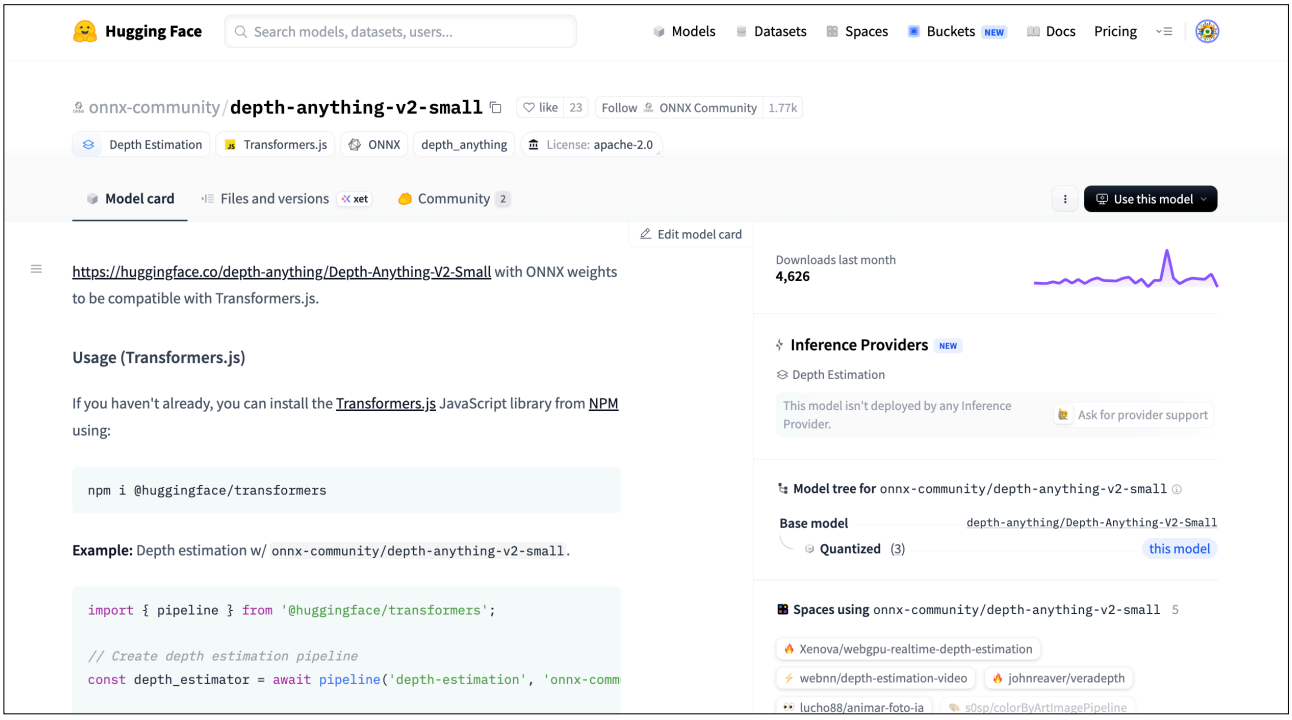
There are numerous tasks. Another one is depth analysis. We follow the same procedure as before. We will use the same photo as before, so keep most of the code from before. Here, it will try to estimate depth in the photo. The brighter the colour, the nearer it is.

I changed the task to depth analysis and scrolled down till I found one I liked the look of. In this case, I chose:

onnx-community/depth-anything-v2-small

I recommend that you look it up yourself and see how I got the code to work.

Figure 1: depth analysis



If you haven't still go it in your sketch from the last unit, download the dog image as we have done before, then upload it as a file. We just call it dog (remember to rename it in the file).

Figure 2: download dog image

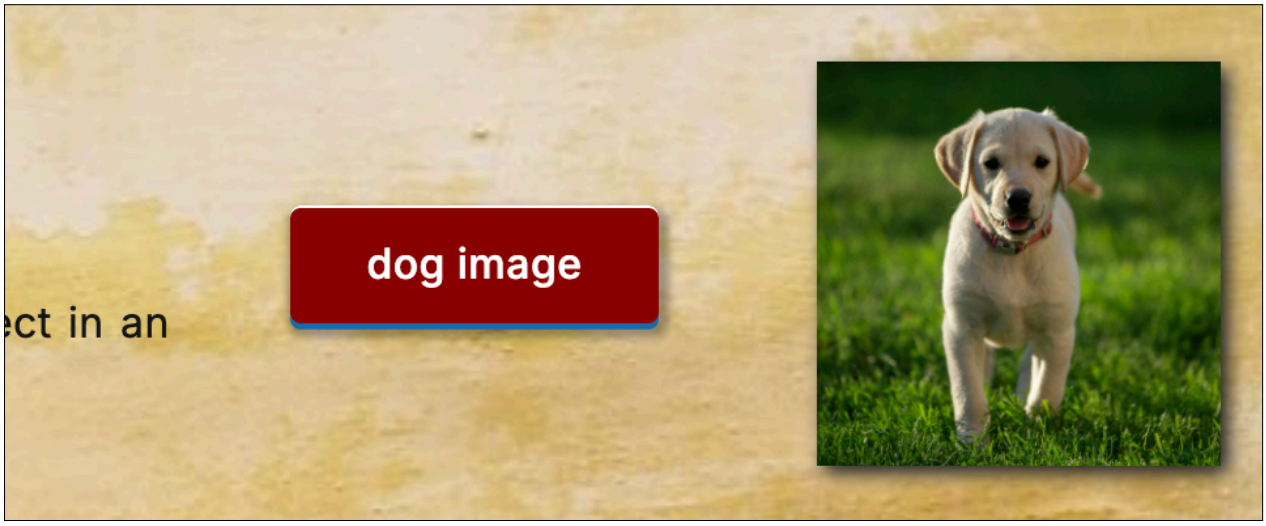
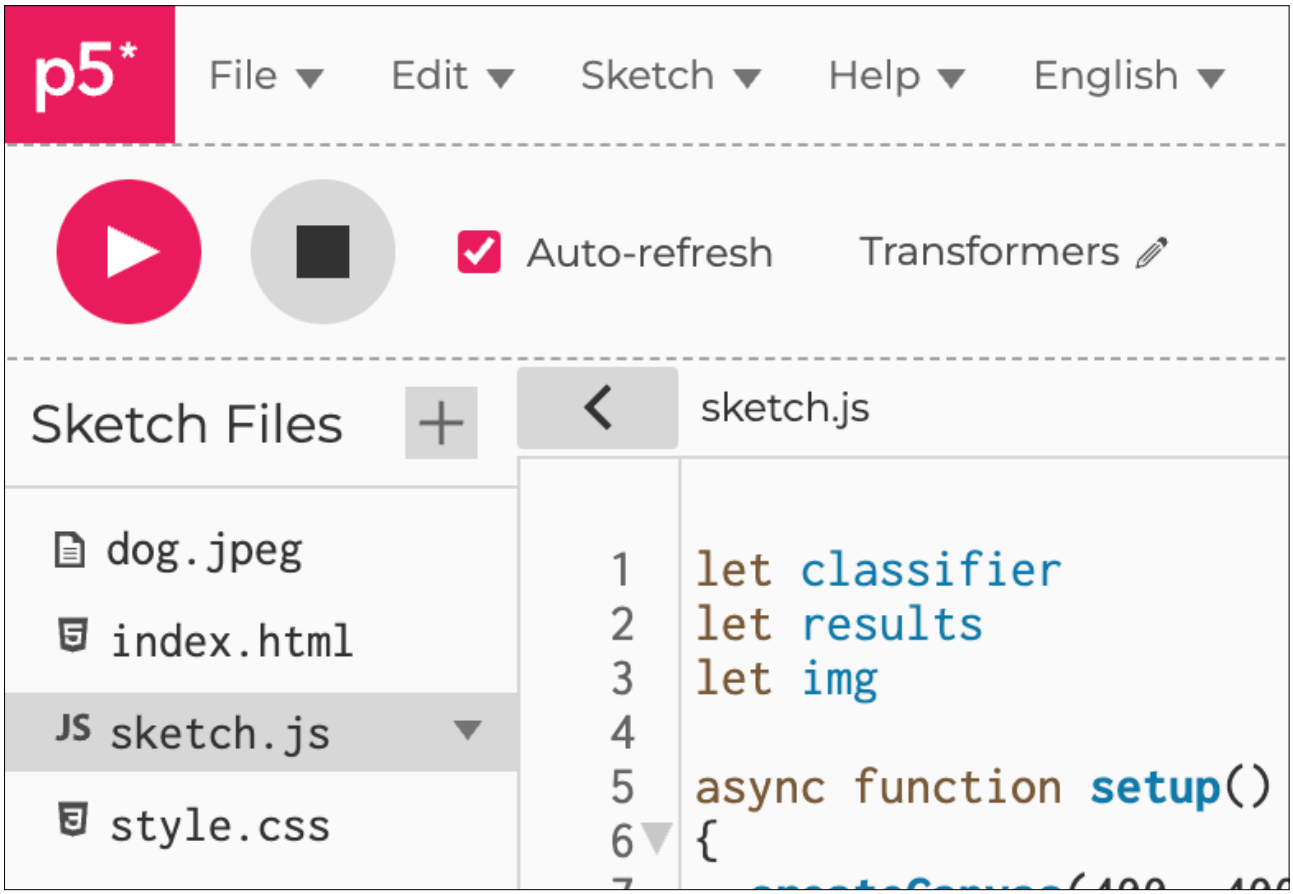


Figure 3: our canine friend

Figure 4: Sketch File (dog added)



Sketch C3.1 the code

Our starting code is below. Very similar to the last one with a different model. We will save the resulting image as a PNG.

```
let depth_estimator
let img


async function setup()
{
  createCanvas(400, 400)
  background(220)
  img = await loadImage('dog.jpeg')
  image(img, 0, 0, 400, 400)
  let { pipeline } = await import('https://cdn.jsdelivr.net/npm/@huggingface/transformers')
  depth_estimator = await pipeline('depth-estimation', 'onnx-community/depth-anything-v2-small')
  const { depth } = await depth_estimator('dog.jpeg')
  depth.save('depth.png')
}
```

🗒️ Notes

The main addition is the depth.save() function; this should result in a PNG being uploaded. The image is below:

Figure C3.1

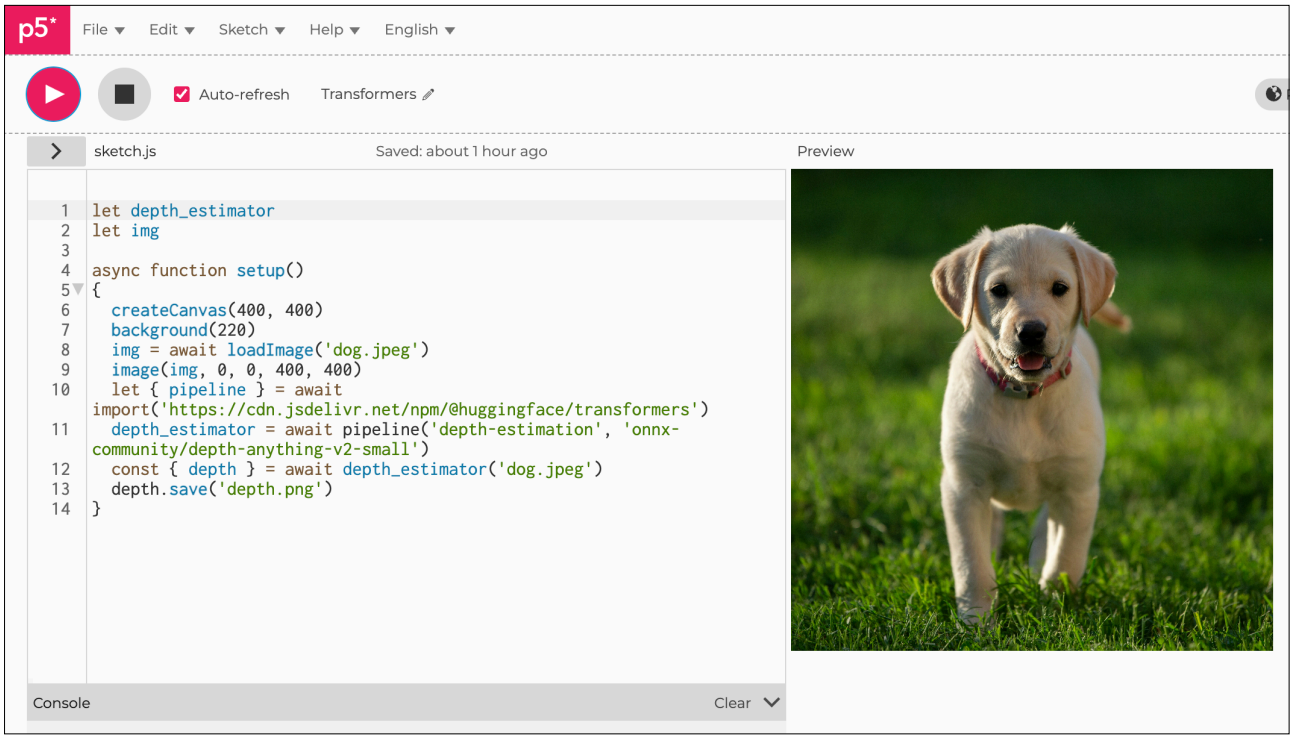


Figure 5: depth analysis