

# Face Mask Portraits



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In this activity you will use Google's **MediaPipe** AI Models to recognise faces from a webcam.

The idea is to use a web browser application that integrates the webcam and the model and a drawing programme to create masks to overlay onto faces detected in the webcam feed. **You** have control of the masks! Have Fun!



## WARNING

**Be kind with the masks and don't offend anyone!**

# Let's get going!



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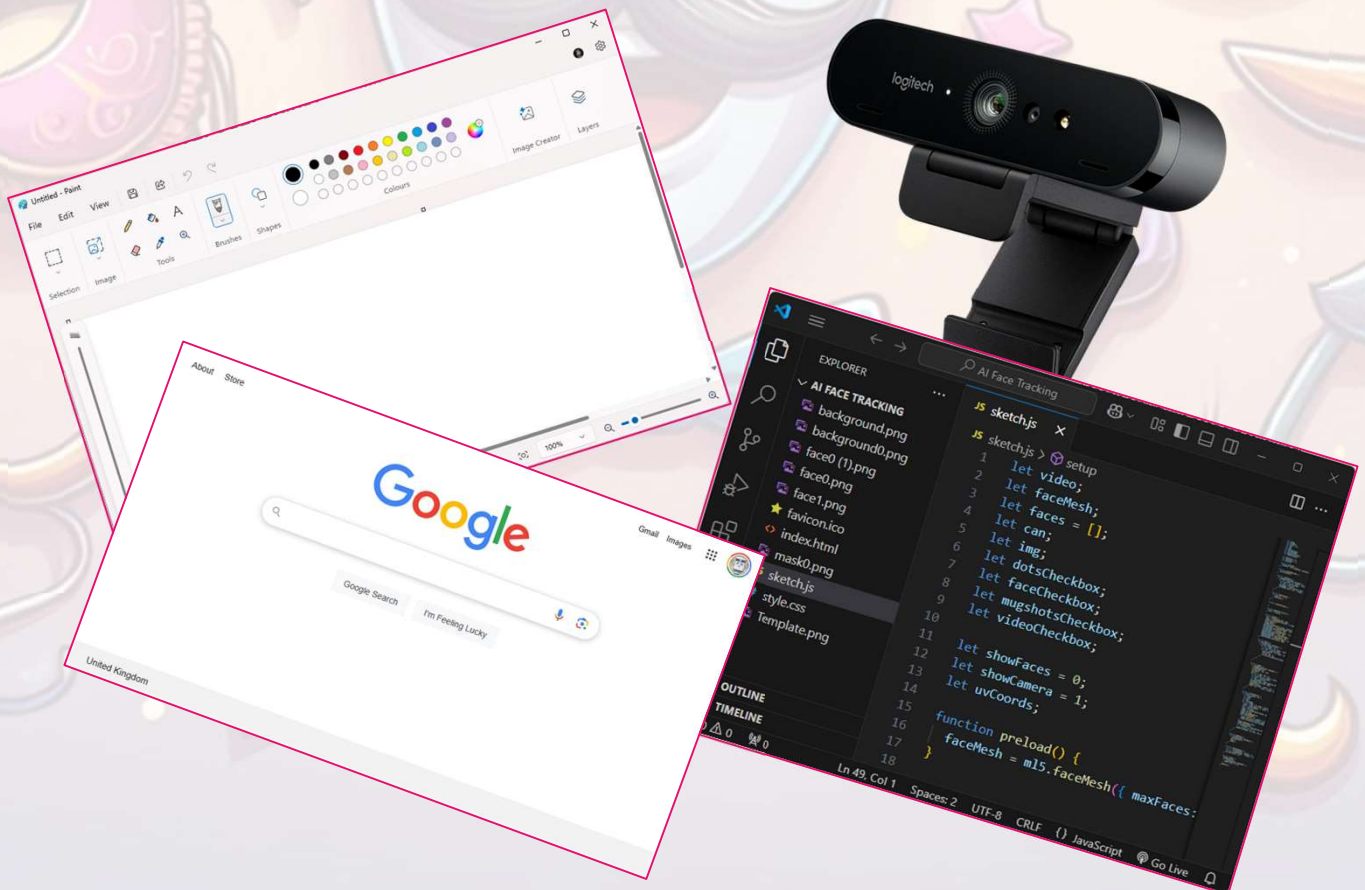
## What do we need!

For this activity we need the following:

- A **web browser** (we recommend you use Chrome).
- A **webcam** connected to the computer.
- A **Drawing Package** (Paint, GIMP, Photoshop).
- **Your Face (and others 😊)!**

The lab computers should already be setup, but if you get stuck at any point, ask for help. We are here to help you. Don't worry if you don't get everything finished in this session there are sample masks in the download.

**Source files: <https://github.com/neliot/Portraits>**





# Let's get going!



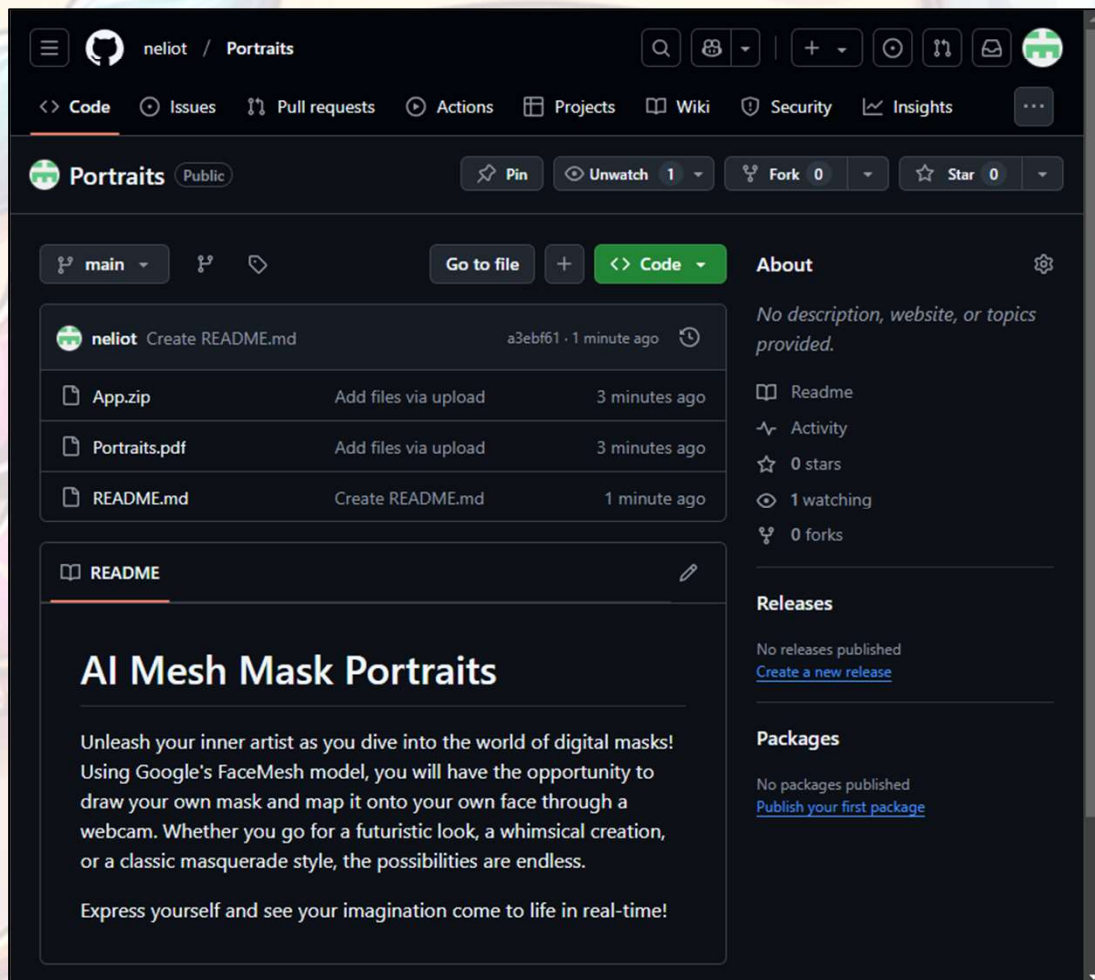
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## Download the application!

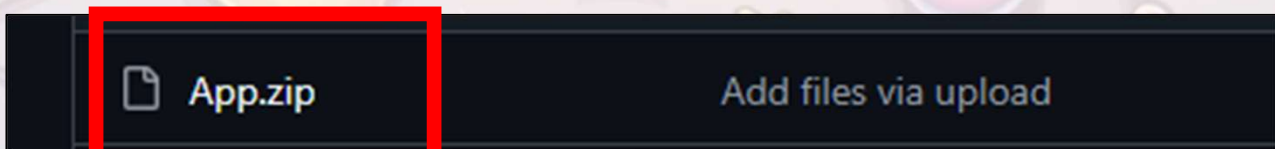
In your browser enter the URL below:

<https://github.com/neliot/Portraits>

You should see a page similar to the one below:



Click on the App.zip file:



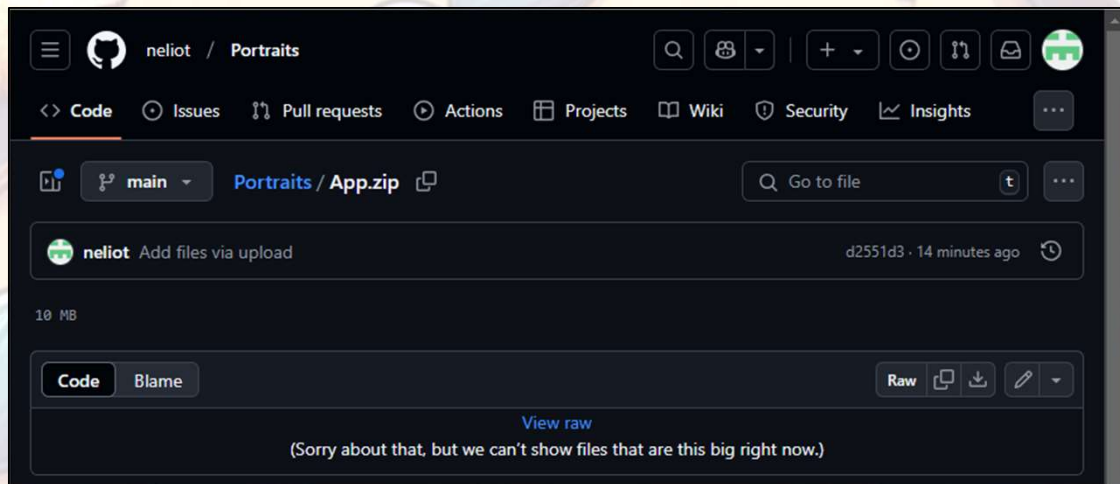
# Let's get going!



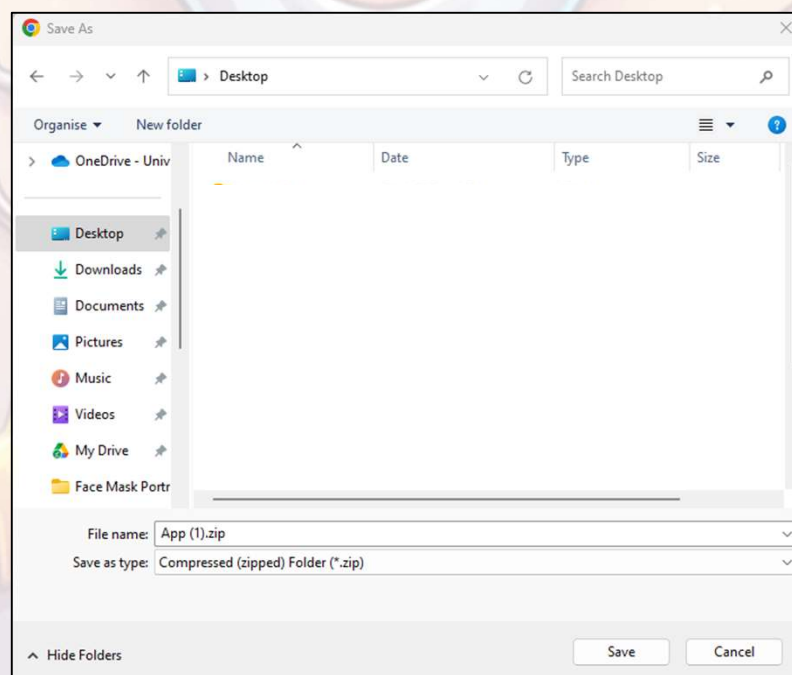
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## Download the application!

You will now be presented with the following screen:



Click on the download icon and save the file to the Desktop:



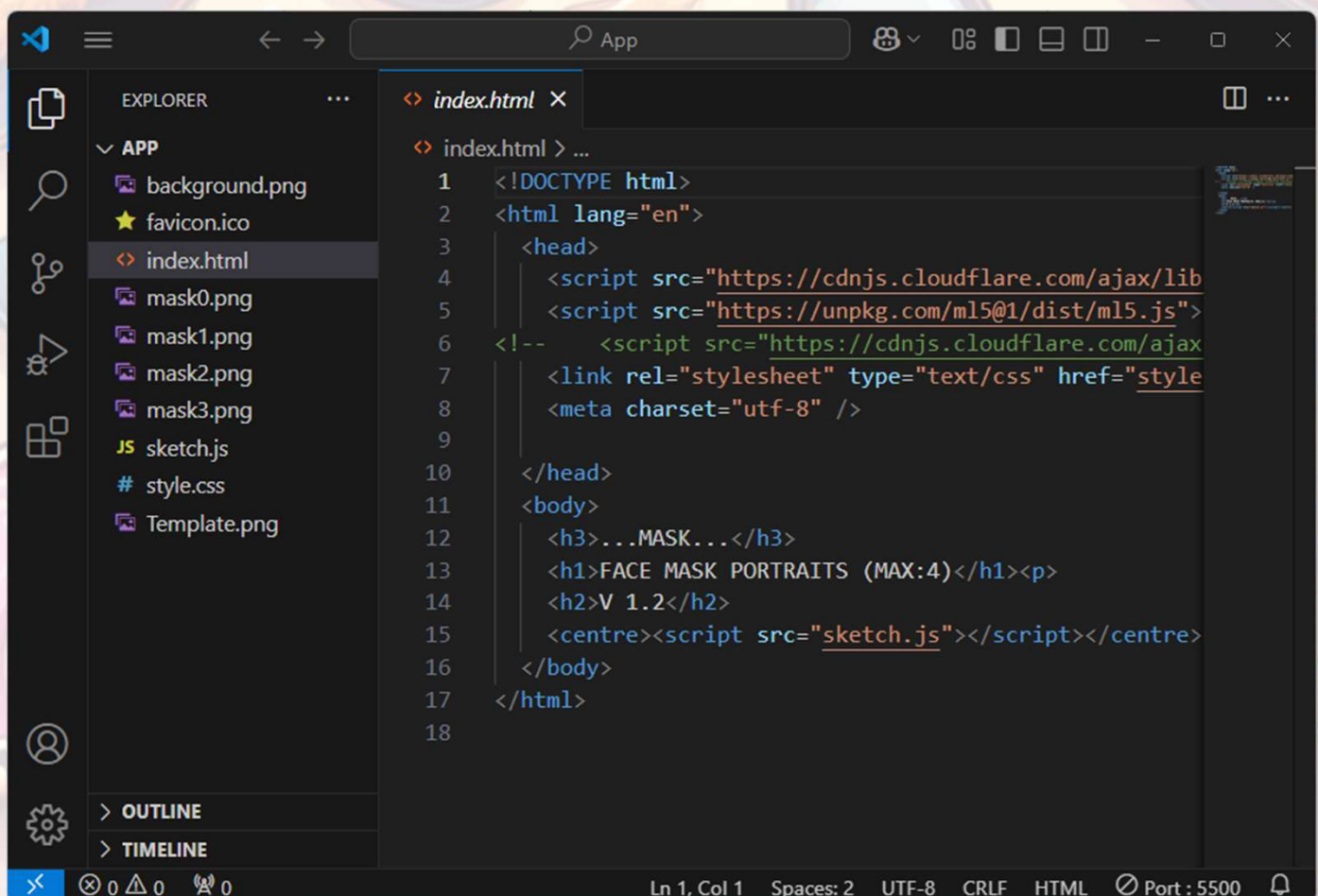


# And now the Editor



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Now you can launch the application. Start VS Code and select **File -> Open Folder** and navigate to folder where you expanded the zip file.

A screenshot of the Visual Studio Code (VS Code) editor interface. The Explorer sidebar on the left shows a folder named 'APP' containing several files: 'background.png', 'favicon.ico', 'index.html' (selected), 'mask0.png', 'mask1.png', 'mask2.png', 'mask3.png', 'JS sketch.js', 'style.css', and 'Template.png'. The main editor area displays the 'index.html' file with the following HTML code:

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <script src="https://cdnjs.cloudflare.com/ajax/lib
5     <script src="https://unpkg.com/ml5@1/dist/ml5.js">
6     <!-- <script src="https://cdnjs.cloudflare.com/ajax
7     <link rel="stylesheet" type="text/css" href="style
8     <meta charset="utf-8" />
9   </head>
10  <body>
11    <h3>...MASK...</h3>
12    <h1>FACE MASK PORTRAITS (MAX:4)</h1><p>
13    <h2>V 1.2</h2>
14    <centre><script src="sketch.js"></script></centre>
15  </body>
16 </html>
```

The status bar at the bottom indicates 'Ln 1, Col 1', 'Spaces: 2', 'UTF-8', 'CRLF', 'HTML', and 'Port : 5500'.

# And Finally!



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On the **BSc Computer Science** Programme at the **University of Sunderland** you'll study AI and Machine Learning in more detail, which means you'll be able to create some amazing things and have a good grasp on this important emerging technology.

