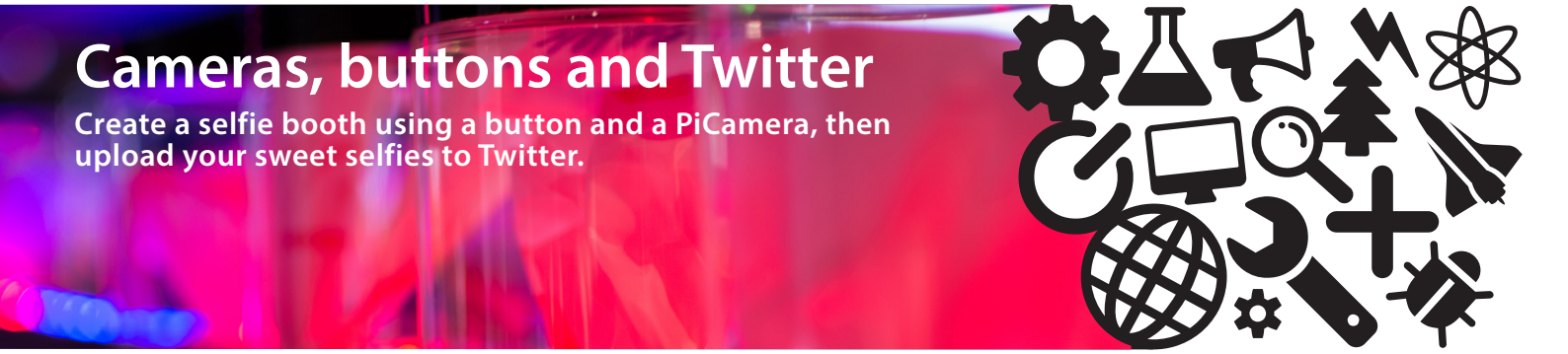
nustem

Cameras, buttons and Twitter

Create a selfie booth using a button and a PiCamera, then upload your sweet selfies to Twitter.



Ingredients

Platform:	Raspberry Pi / Raspbian Python3
Components:	PiCamera Button
Libraries:	twython picamera gpiozero signal

Glossary

Twython	a Python library for posting text, images and video to Twitter, and for receiving and searching for tweets do you can act upon them. The setup is a bit involved, details can be found at: https://twython.readthedocs.io

PiCamera

The Raspberry Pi camera module is called the PiCamera. It attaches via a ribbon cable to the Raspberry Pi. We can use it to take pictures and record video. There's guidance online for how get it set up (we've done it for you):

`https://projects.raspberrypi.org/en/projects/getting-started-with-picamera`

camera.py

All the code for this worksheet is in `Digital-Making/examples/button-camera/`. Start by loading `camera.py` in Thonny.

Run the code. Once your photo has been taken, take a look in the folder at your wonderful face. Now try changing:
— the annotated text
— the image effect (look for the web-link in the code)

buttonCameraTwit.py

Load this example into Thonny. Read through the code and see if you can work out what will happen when you press the button. Then run the code – you can check your Tweet at: `https://twitter.com/TechWishingWell`

Note: pressing the button will take an image and upload it to twitter. We'll delete all the tweets at the end of the session today. If you don't fancy your face ending up on the internet, steer clear of the camera!

The part of the code that waits for the button press is wrapped up in a function:

```
if __name__ == "__main__":
```

Python scripts can be run in two ways, as a main file or as an imported module. The function above checks if the script is the main file and runs the code if it is. This is useful when you're incorporating other people's code into your projects.

Bringing it together

Your challenge here is to add the funky effects and annotation you've just played with to `buttonCameraTwit.py`. Also, try changing the status update – currently it uploads a random tweet but I'm sure you can think of something more interesting!

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