



A long time ago in a galaxy far, far away...

EDIBLE

A NEW HOPE

INSECTS

CARLETON BIOLOGY presents
A MACMILLAN & BERTRAM Lab Production
EDIBLE INSECTS: A NEW HOPE
Staring EMILY MCCOLVILLE, ANDRE TELFER
MATTHEW MUZZATTI, DR. SUE BERTRAM,
and DR. HEATH MACMILLAN

USING DEEP LAB CUT

Produced by Carleton University
Funded by the Canadian Space Agency & NSERC



Manual Grouping

Head_Right

Head_Left

Thorax_Right

Thorax_Left

Thorax_Top

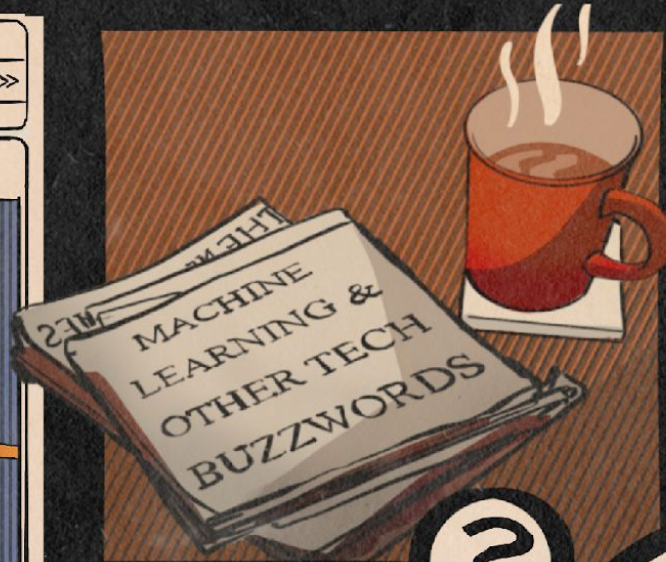
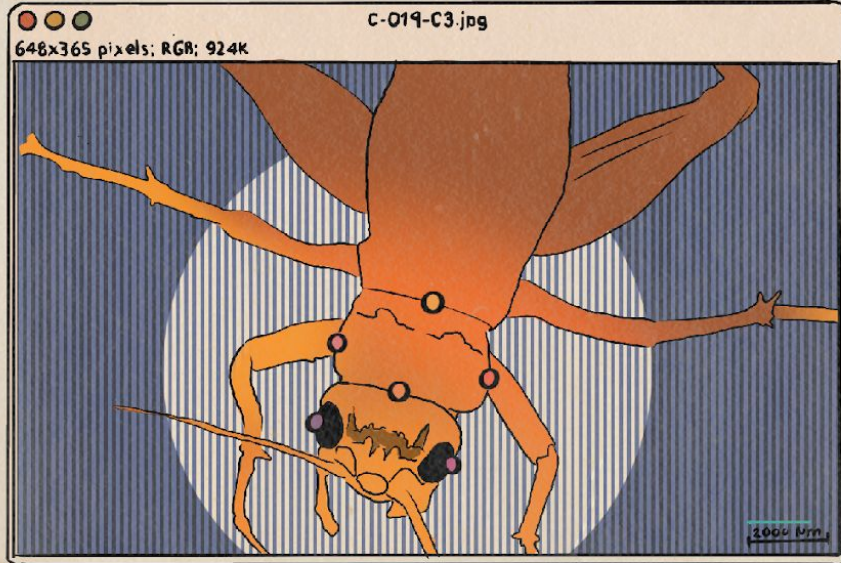
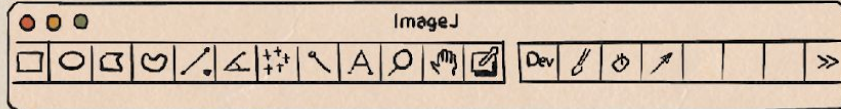
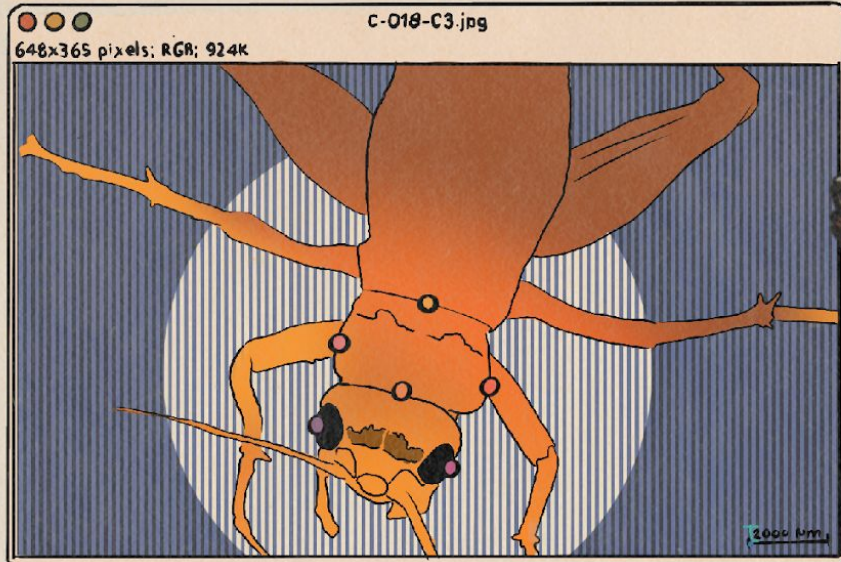
Thorax_Bottom

Scale

2000 um

Scale Left

Scale Right



DID YOU TRY STACK OVERFLOW?

```
FileNotFoundError
Cell In[1], line 18
    15 from pathlib import Path
    17 images = list()
--> 18 for file in Path("path/to/folder"):
    19     if not file.is_file():
    20         continue

File /opt/homebrew/Cellar/python@3.10/3.10
1013 def iterdir(self):
1014     """Iterate over the files in t
1015     result for the special paths '
1016     """
1017     for name in self._accessor.lis
        if name in {'.', '..'}:
            # Yielding a path obje
            continue

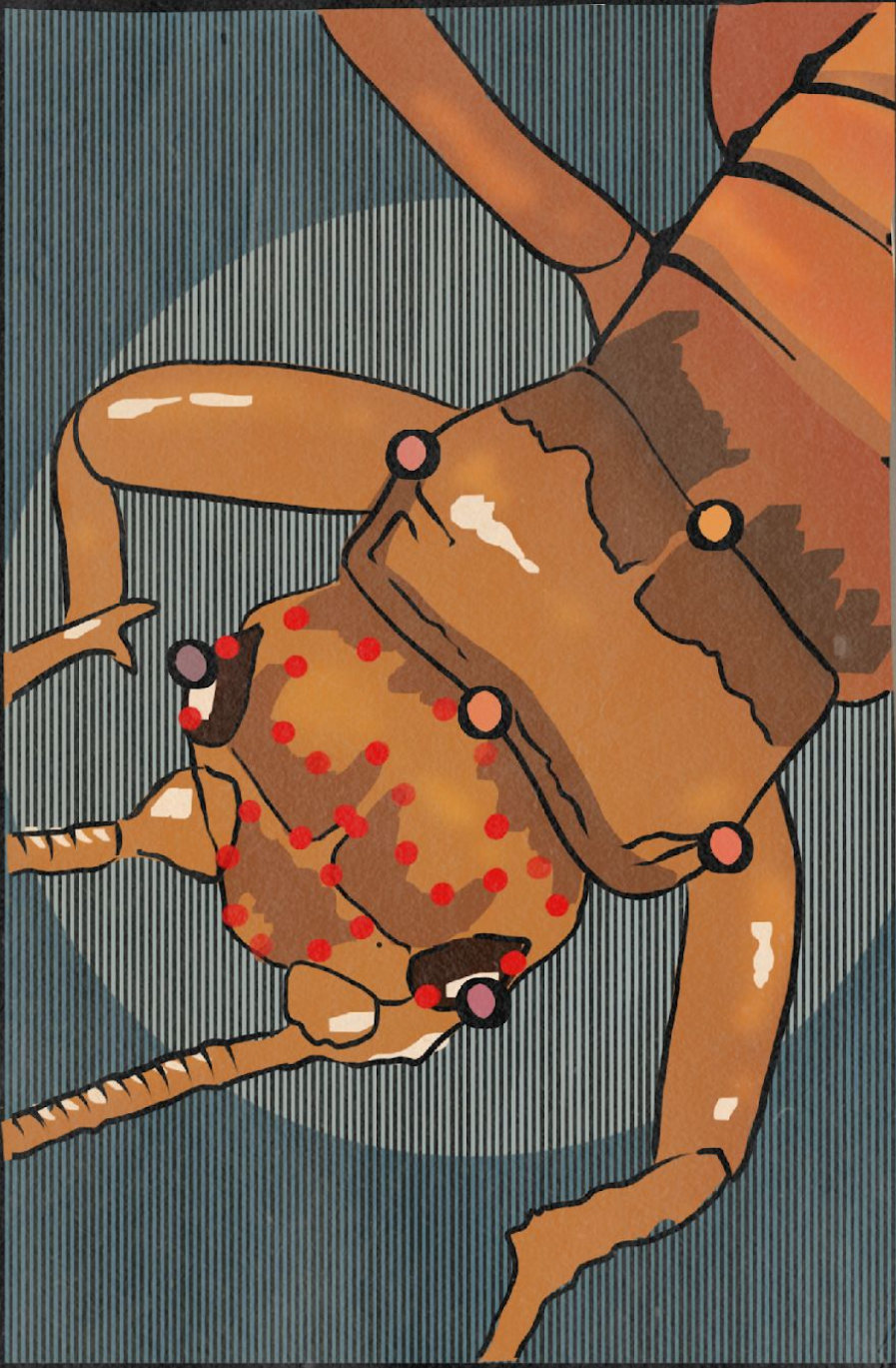
FoundError: [Errno 2] No such file

#read all images in a folder
import imageio.v3 as iio
from pathlib import Path

images = list()
for file in Path("path/to/folder").ite
    if not file.is_file():
        continue

    images.append(iio.imread(file))

#get frames from a webcam
import imageio.v3 as iio
import numpy as np
```

- INDIVIDUAL PATTERNS
- PYTHON-WRANGLING
- ANNOTATIONS



- COLLECT LIVE DATA, LOW COST/LABOUR
- SELF-IMPROVING SOFTWARE
- GET BIG DATA!
- MONITOR COLONY BEHAVIOR (SICKNESS)
- SMART FARMING IS EFFICIENT
- SCALABLE AND VERSATILE



SCAN THE CODE,
YOU WILL



QUESTIONS?

