

raport

May 15, 2022

0.1 Setup

```
[2]: !poetry install  
!poetry shell
```

Installing dependencies from lock file

No dependencies to install or update

```
Installing the current project: dwornik1  
(0.1.0)Installing the current project: dwornik1  
(0.1.0)  
Virtual environment already activated:  
/home/maciej/.cache/pypoetry/virtualenvs/dwornik1-hMZs2uod-py3.10
```

```
[5]: from PIL import Image
```

0.2 Obrazy poczatkowe

```
[6]: Image.open('./input/penguin.jpg')
```

```
[6]:
```



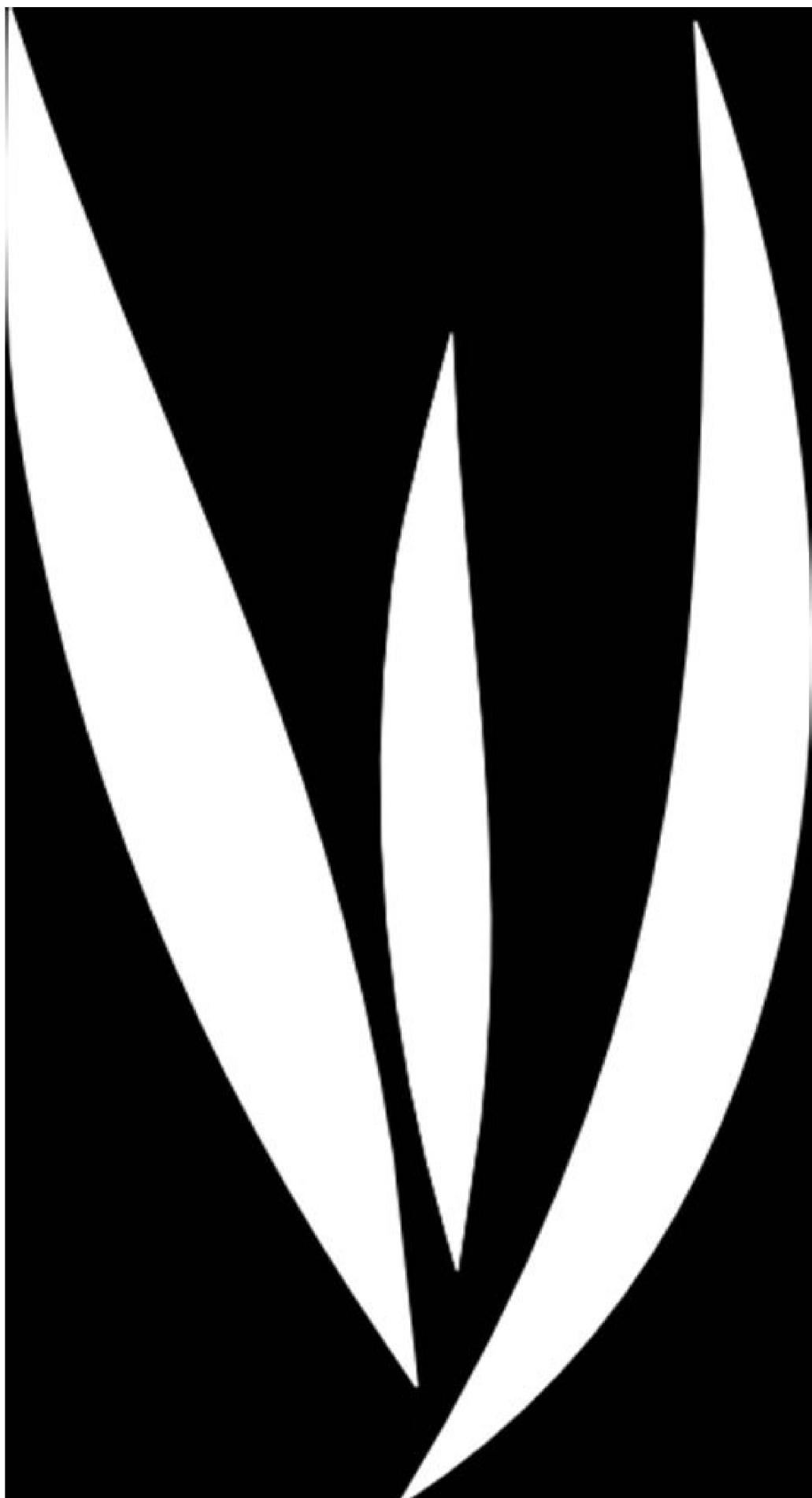
```
[7]: Image.open('./input/mono.jpg')
```

```
[7]:
```



```
[8]: Image.open('./input/logic.jpg')
```

```
[8]:
```



0.3 Normalizacja obrazu wg lamanej opisanej przez min

0.3.1 RGB

```
[3]: !normalize input/penguin.jpg -p 5,10 -p 50,15 -p 100,25
```

```
[6]: Image.open('./out/normalize_o.jpg')
```

```
[6]:
```



0.3.2 Mono

```
[7]: !normalize input/mono.jpg -m -p 5,10 -p 50,15 -p 100,25
```

```
[8]: Image.open('./out/normalize_o.jpg')
```

```
[8]:
```



0.4 Filtracja ochylenia standardowego

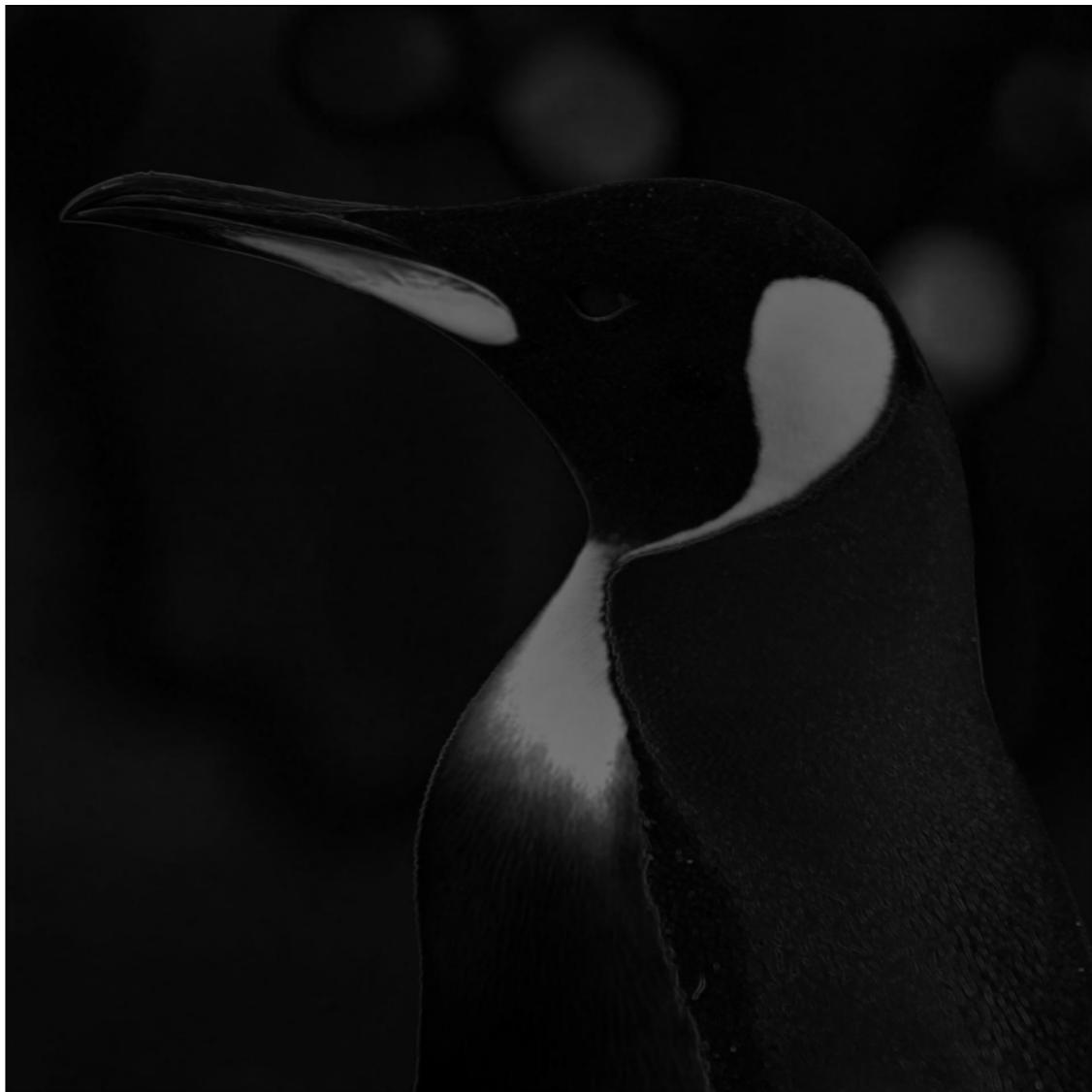
0.4.1 RGB

```
[13]: !filter input/penguin.jpg 5
```

```
100%| 3667225/3667225 [00:46<00:00, 79664.61it/s]
```

```
[14]: Image.open('./out/filter_o.jpg')
```

```
[14]:
```



0.4.2 Mono

```
[17]: !filter input/mono.jpg 5 -m
```

```
100%| 2441625/2441625 [00:31<00:00, 78090.51it/s]
```

```
[18]: Image.open('./out/filter_o.jpg')
```

```
[18]:
```



0.5 Zamkniecie kolem o zadanym promieniu

0.5.1 Mono

```
[19]: !close input/mono.jpg 5
```

```
100%|          | 2425700/2425700 [00:04<00:00, 518710.16it/s]
100%|          | 2425700/2425700 [00:04<00:00, 523774.44it/s]
```

```
[20]: Image.open('./out/close_o.jpg')
```

```
[20]:
```



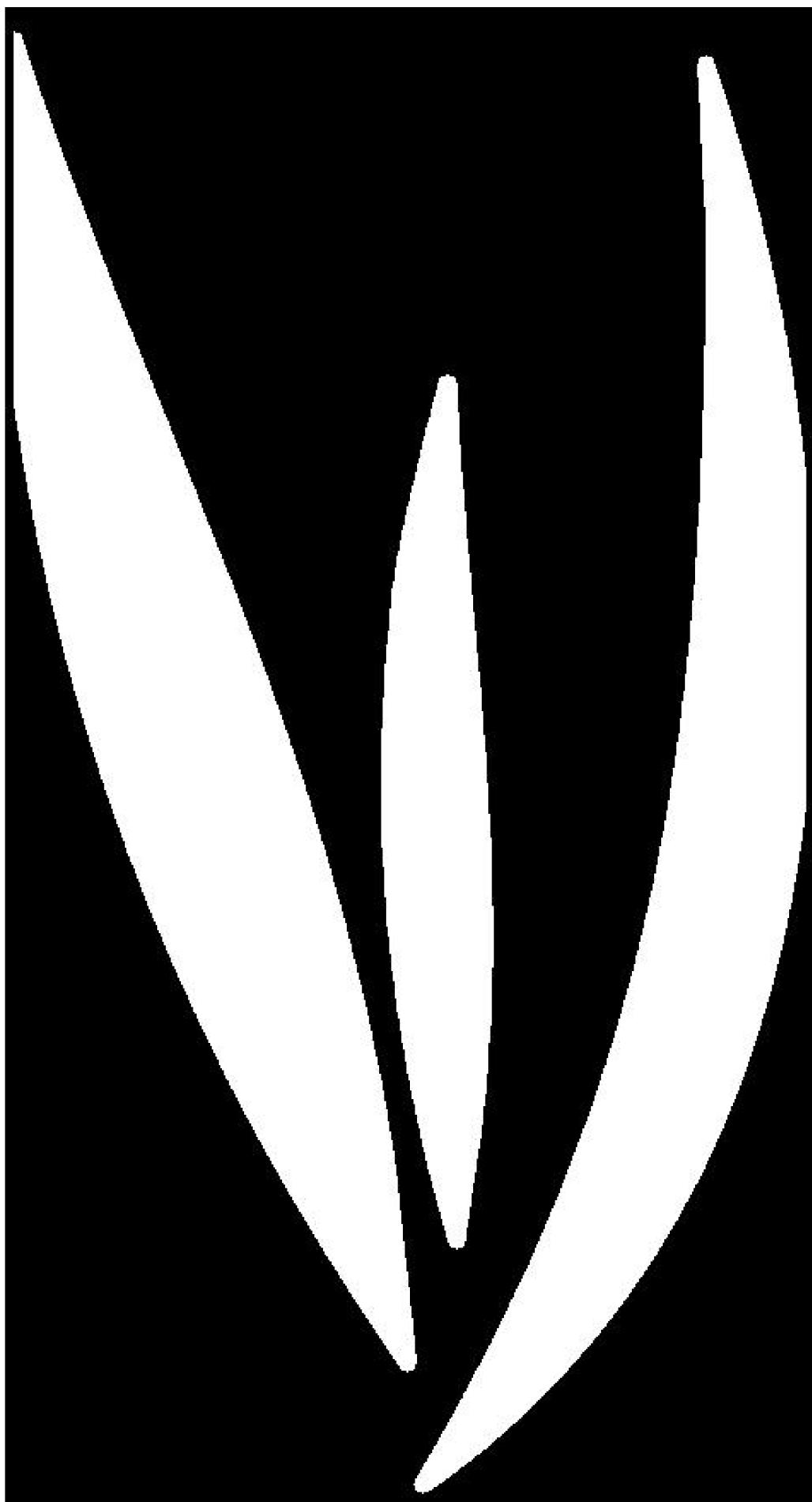
0.5.2 Logic

```
[9]: !close input/logic.jpg 5 -l
```

```
100%|          | 403216/403216 [00:00<00:00, 474732.01it/s]
100%|          | 403216/403216 [00:00<00:00, 505283.90it/s]
```

```
[10]: Image.open('./out/close_o.jpg')
```

```
[10]:
```



0.6 Otoczka wypukla

0.6.1 Logic

```
[13]: !convex input/logic.jpg
```

```
[14]: Image.open('./out/convex_o.jpg')
```

```
[14]:
```


[]: