

CLASSIFYING UNDERWATER PHOTOS WITH DEEP LEARNING

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WHY CLASSIFY DIVE PHOTOS?

To filter low-quality or
uninteresting photos from a dive
session



INTERESTING PHOTOS

CLEAR IMAGES



RECOGNIZABLE SUBJECTS



LARGE MARINE LIFE



NOT INTERESTING PHOTOS



**CAN WE TRAIN
A MODEL TO
CLASSIFY
INTERESTING
DIVE PHOTOS?**





DATA

My own dive photos & videos

2,000

Balanced training set

200

Unique test set



MODEL

VGG16 Base

1 Dense Layer

1 Dropout (0.5)

Output: Sigmoid

RESULTS ON UNSEEN DIVES

100% Precision
78% Recall





FUTURE WORK

- Add more diverse data
 - Classify marine life

The background features a photograph of ocean waves under a clear sky. A large, black, geometric shape, resembling a stylized triangle or a large 'L' rotated, is overlaid on the right side of the image. This shape contains the 'THANKS !' text and the credits.

THANKS !

CRÉDITS: Ce modèle de présentation a été créé par **Slidesgo**, comprenant des icônes de **Flaticon**, des infographies et des images de **Freepik**

APPENDIX

Model: "sequential_4"

| Layer (type) | Output Shape | Param # |
|---------------------|--------------|-----------|
| vgg16 (Functional) | (None, 1000) | 138357544 |
| flatten_4 (Flatten) | (None, 1000) | 0 |
| dense_8 (Dense) | (None, 1024) | 1025024 |
| dropout_4 (Dropout) | (None, 1024) | 0 |
| dense_9 (Dense) | (None, 1) | 1025 |

Total params: 139,383,593

Trainable params: 5,123,049

Non-trainable params: 134,260,544

APPENDIX

