

Hackathon

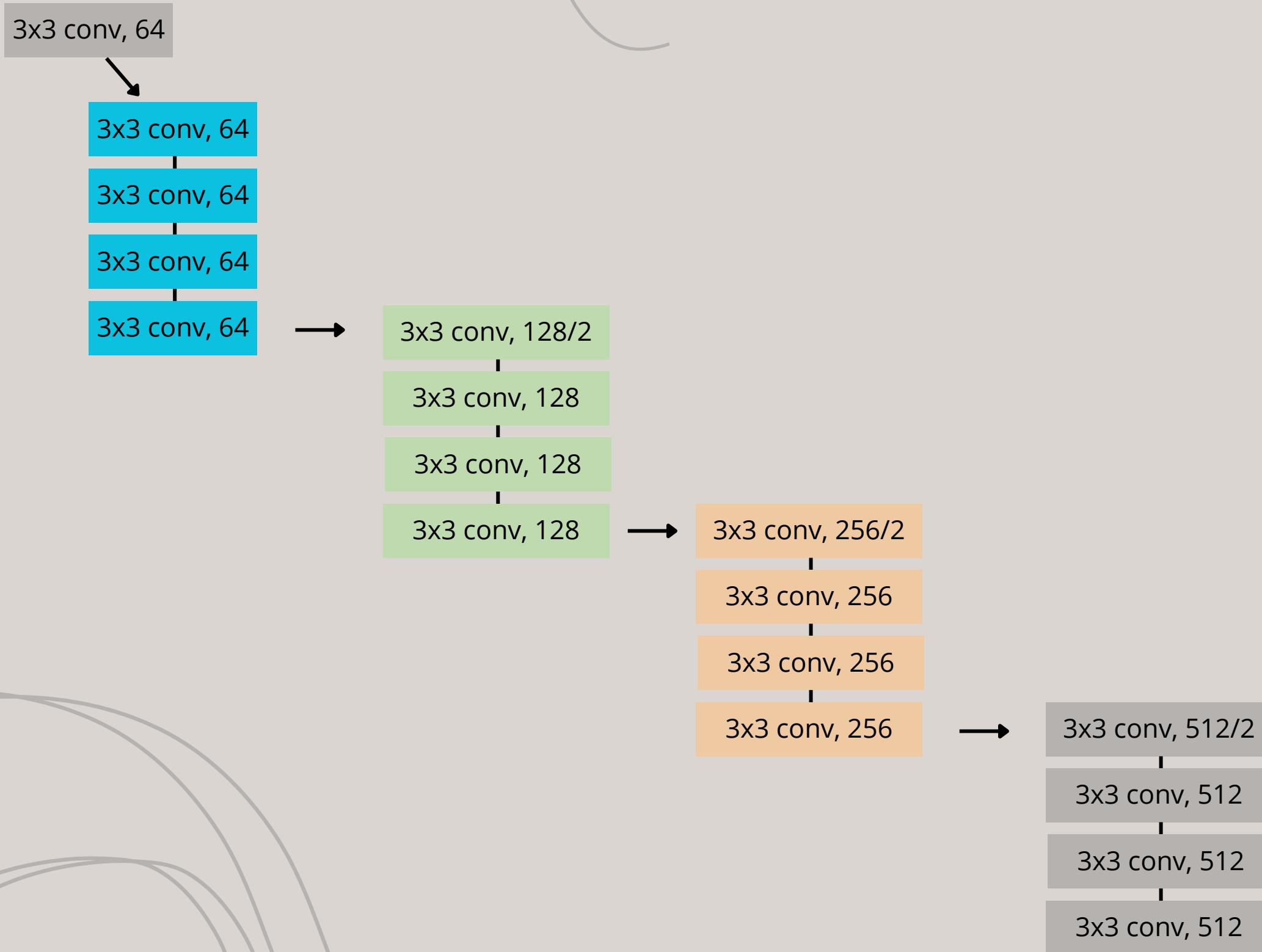
Projet 6métrie

Data set

Composition:

- 16 185 images de 196 classes de voitures.
- Les données sont divisées en 8 144 images d'apprentissage et 8 041 images de test
- Chaque classe est divisée à parts relativement égales.
- Les classes se différencient par rapport à la marque, au modèle et à l'année.

Input

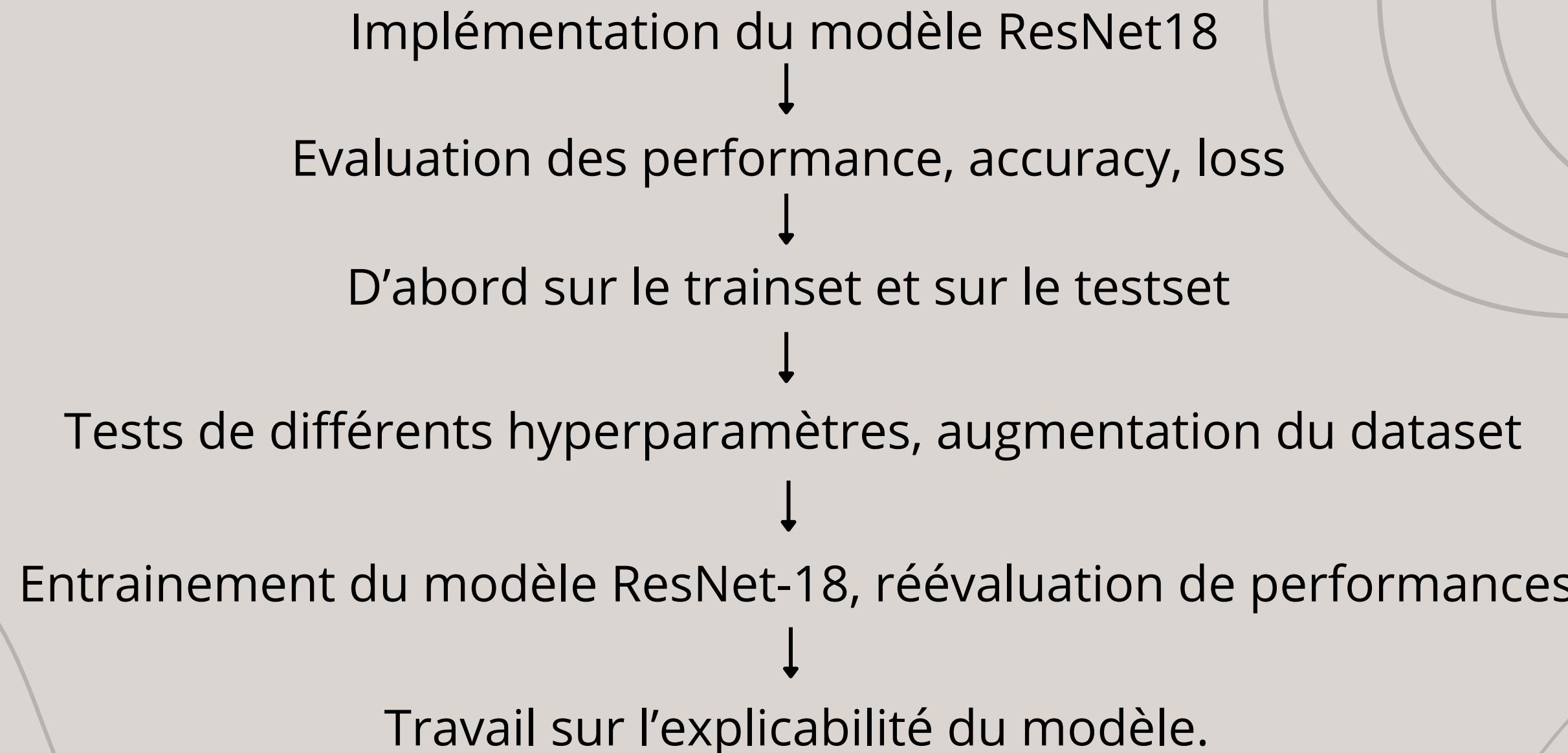


Avg poll

FC

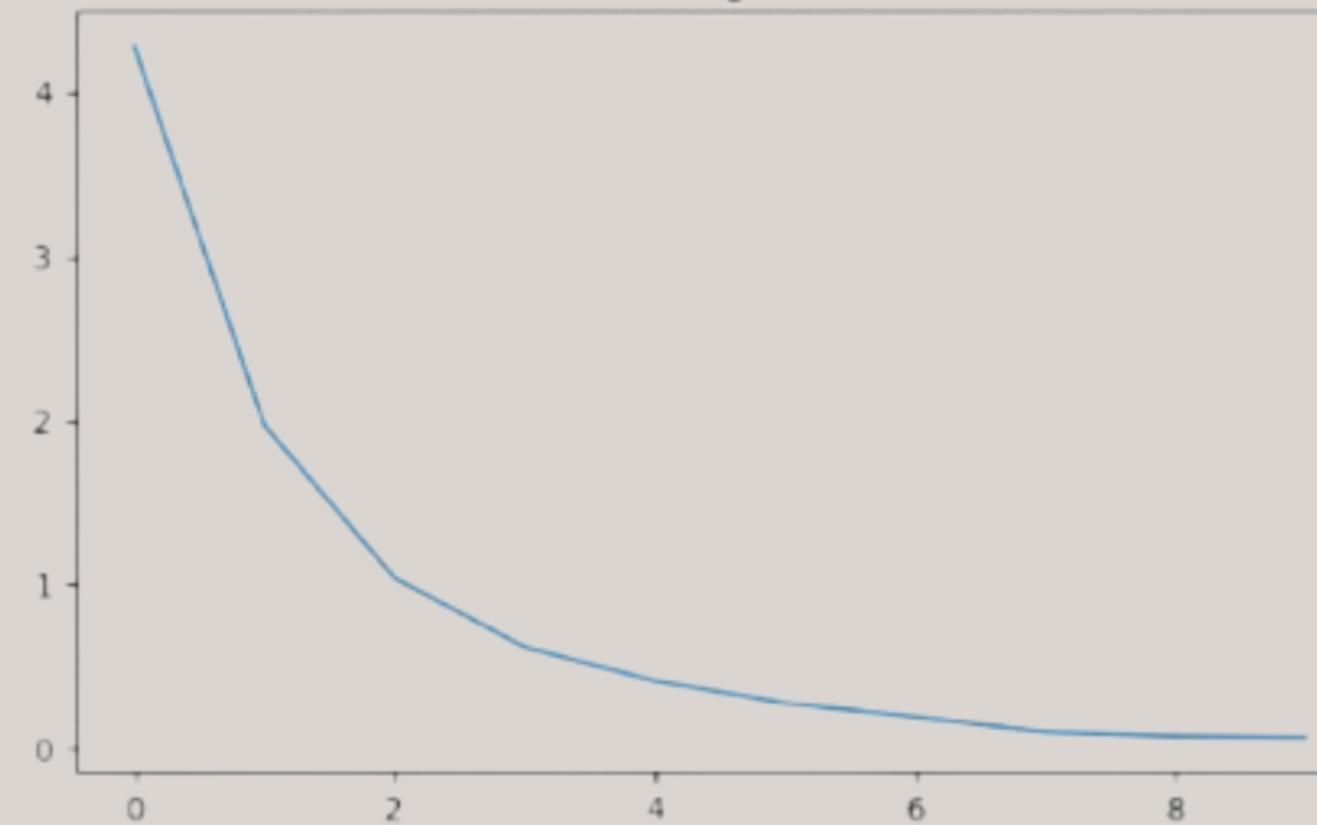
Softmax

Code



Résultats

Training Loss

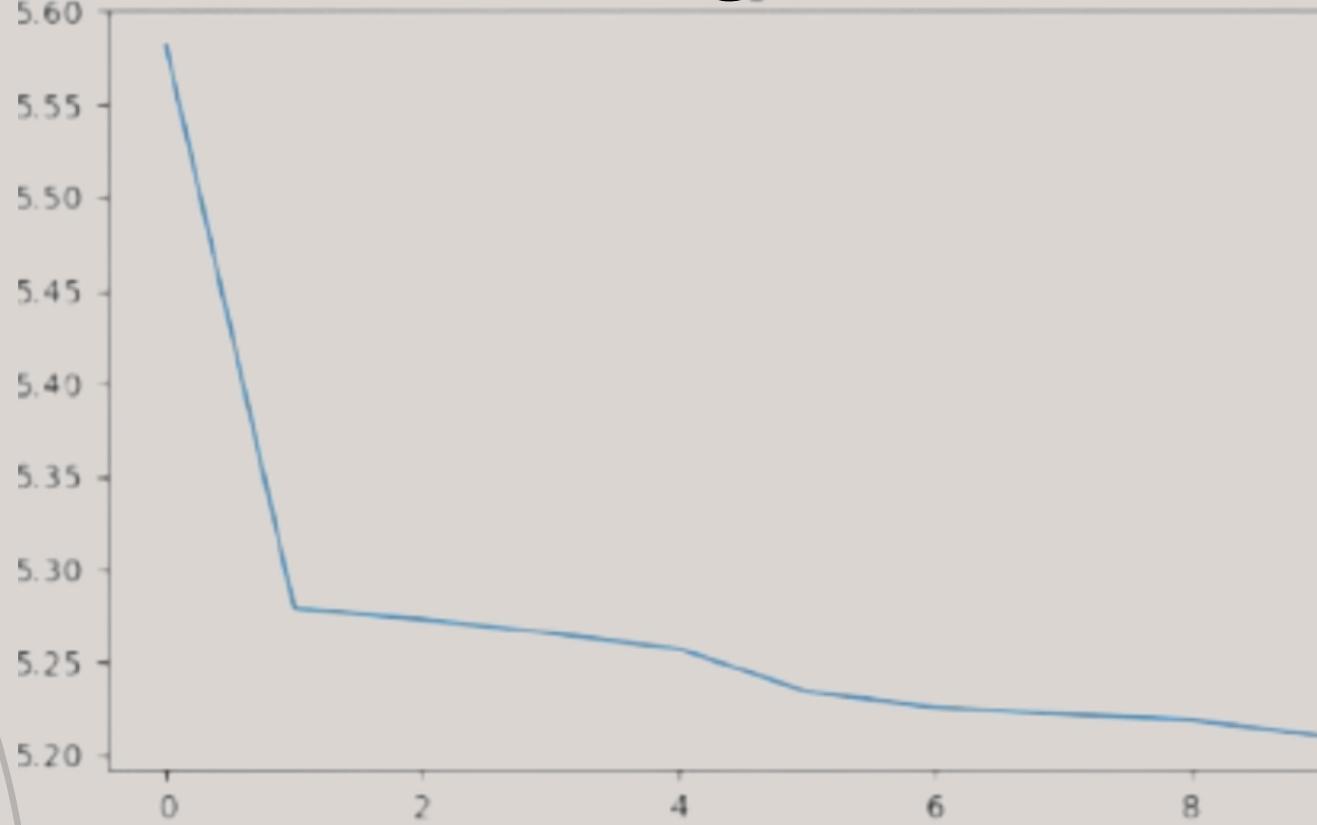


Training and Test accuracy

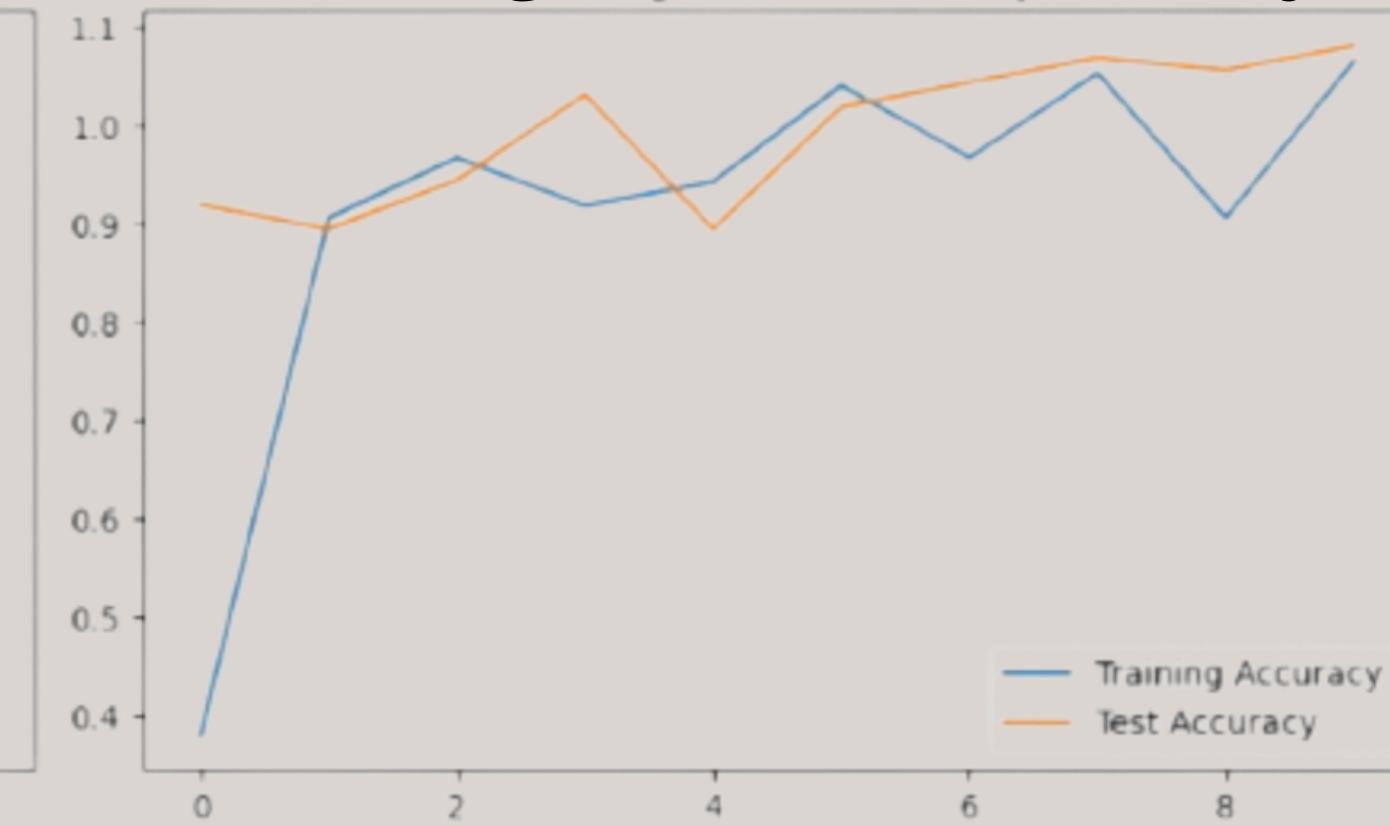


optimizer sgd,
learning rate à
0.01

Training Loss

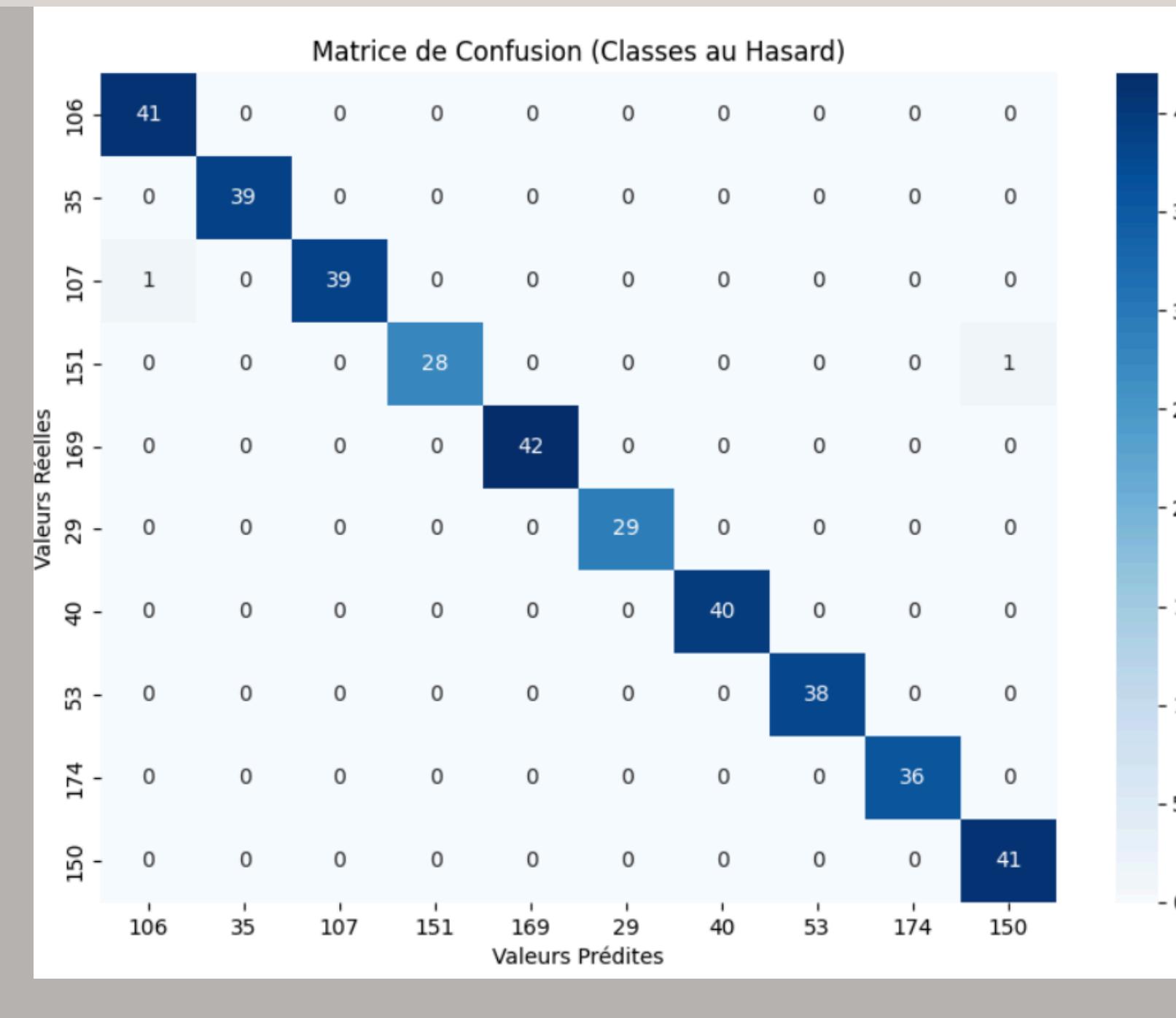


Training and Test accuracy



optimizer
learning rate 0.01

Matrice de confusion/classification report



Classification Report:

	precision	recall	f1-score	support
0	0.95	0.95	0.95	44
1	0.93	0.95	0.94	44
2	0.68	0.84	0.75	32
3	0.84	0.98	0.90	43
4	0.95	0.95	0.95	42
5	0.97	0.82	0.89	40
6	0.90	0.90	0.90	39
7	0.80	0.80	0.80	45
8	0.79	0.73	0.76	41
9	0.87	0.82	0.84	33
10	0.77	0.87	0.81	38
11	0.68	0.75	0.71	40

Explicabilité

Image Originale



Grad-CAM



Saliency Map Overlay

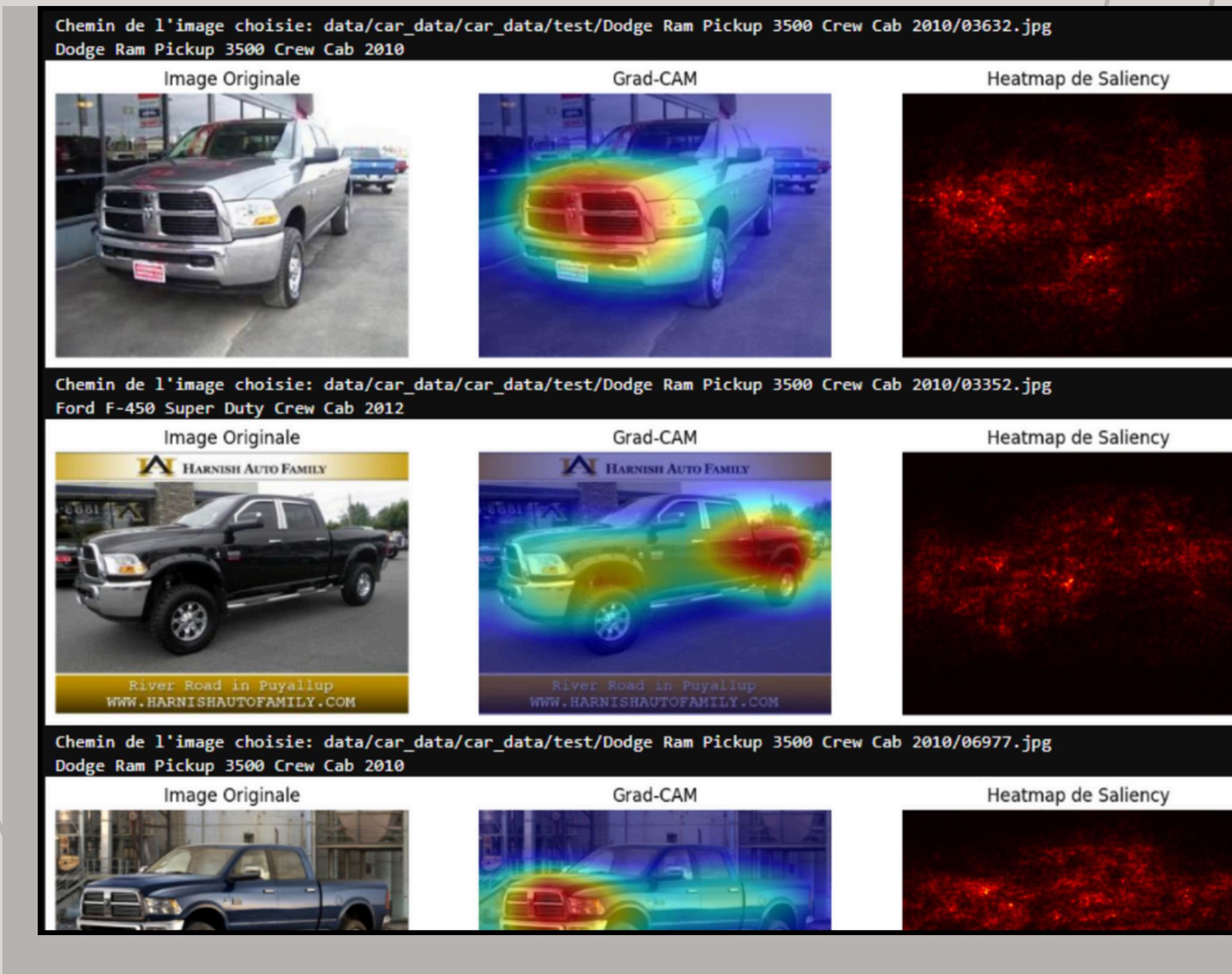


pytorch

heat map

RESULTAT = 89%

Explicabilité



Explicabilité

Dodge Ram Pickup 3500 Crew Cab 2010

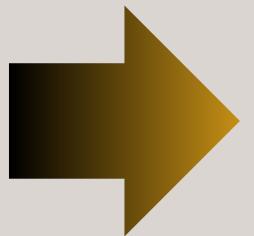


Ford F-450 Super Duty Crew Cab 2012

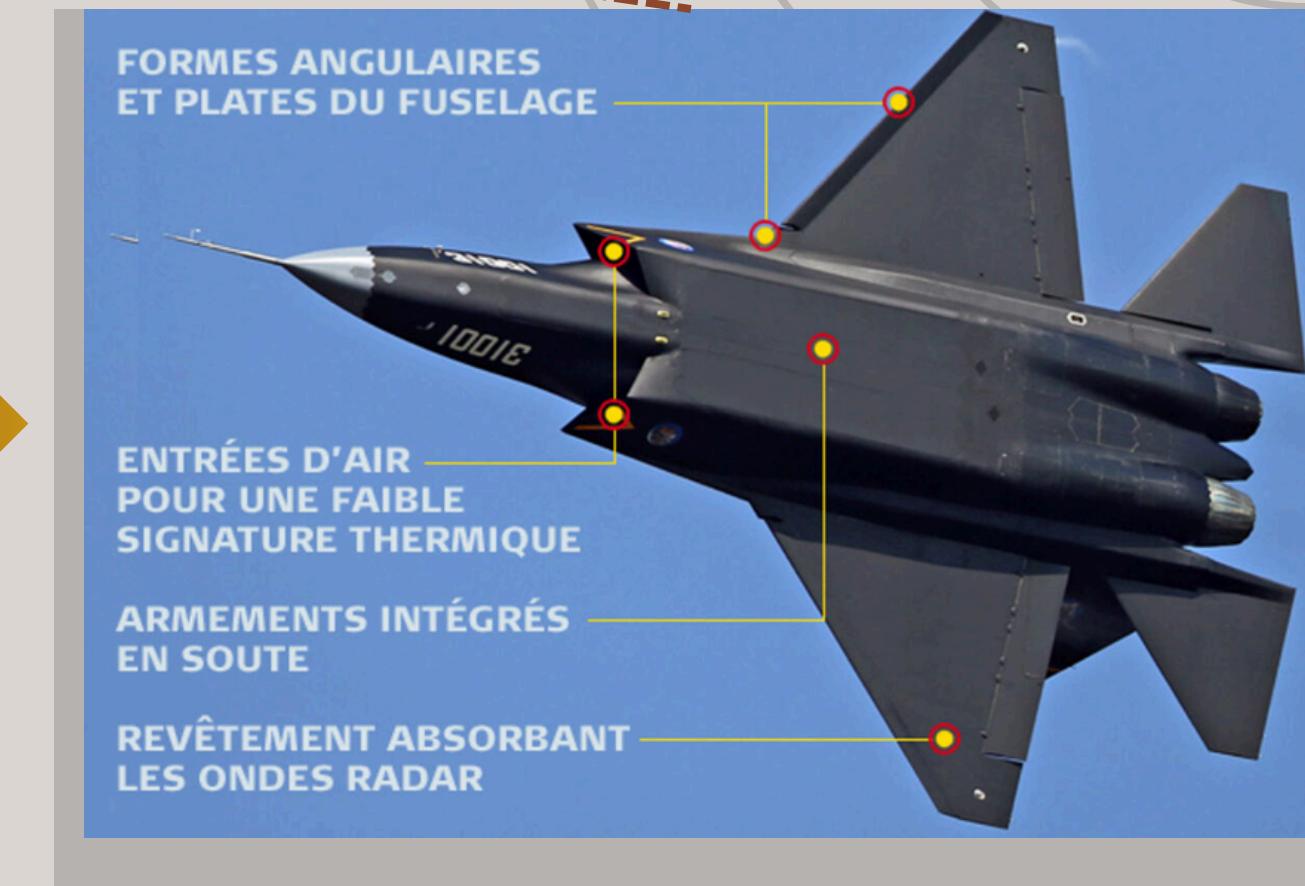


Explicabilité

Dodge Ram Pickup 3500 Crew
Cab 2010



Future utilisation



Hackathon

Projet 6métrie