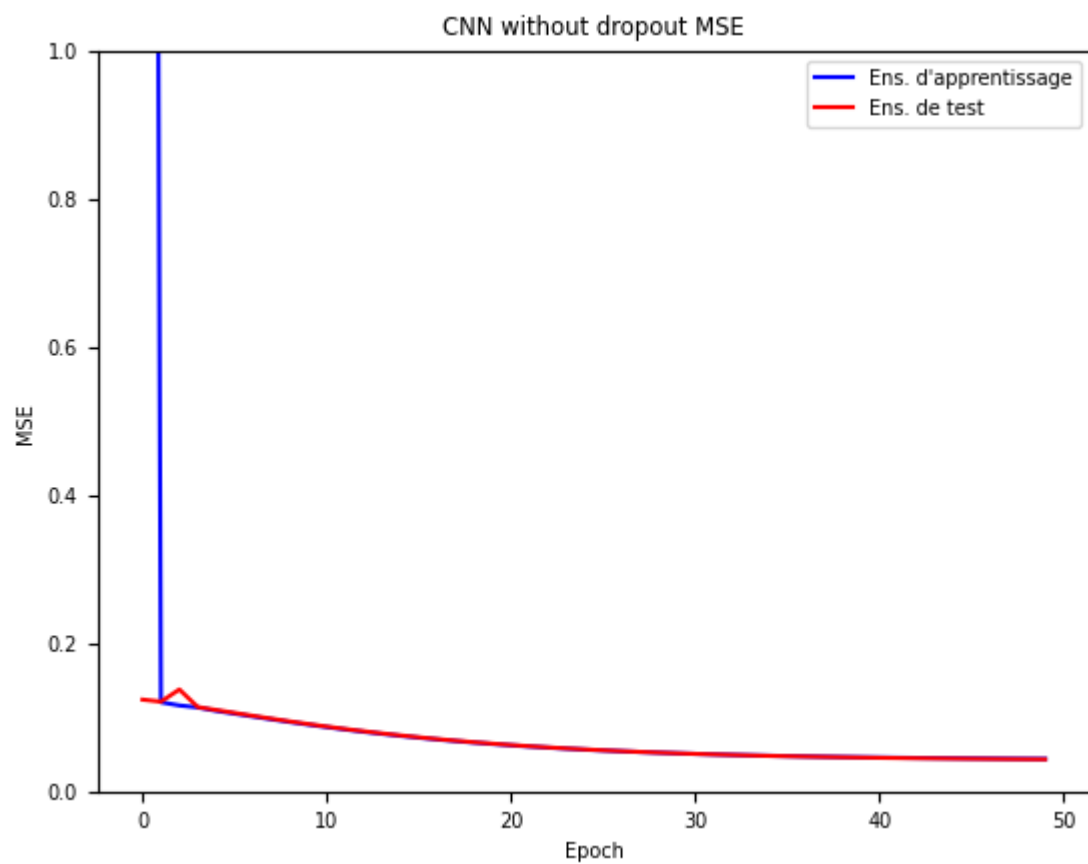
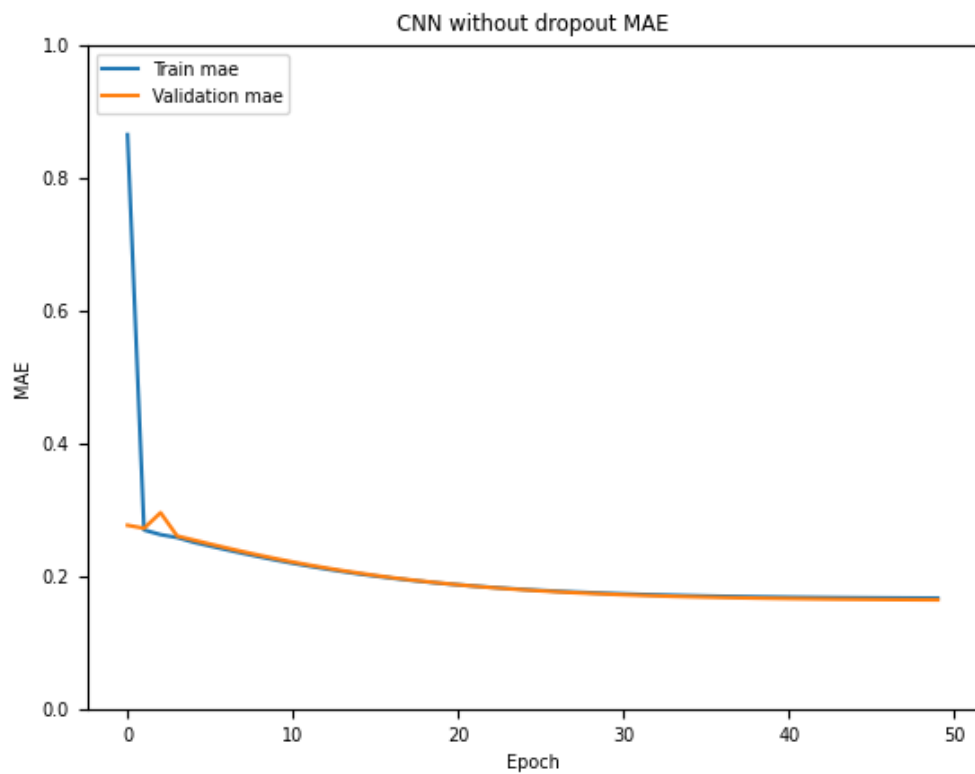


CNN without dropout

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 222, 222, 16)	448
max_pooling2d (MaxPooling2D)	(None, 111, 111, 16)	0
conv2d_1 (Conv2D)	(None, 109, 109, 32)	4640
max_pooling2d_1 (MaxPooling2D)	(None, 54, 54, 32)	0
flatten (Flatten)	(None, 93312)	0
dense (Dense)	(None, 512)	47776256
dense_1 (Dense)	(None, 200)	102600
Total params: 47,883,944		
Trainable params: 47,883,944		
Non-trainable params: 0		

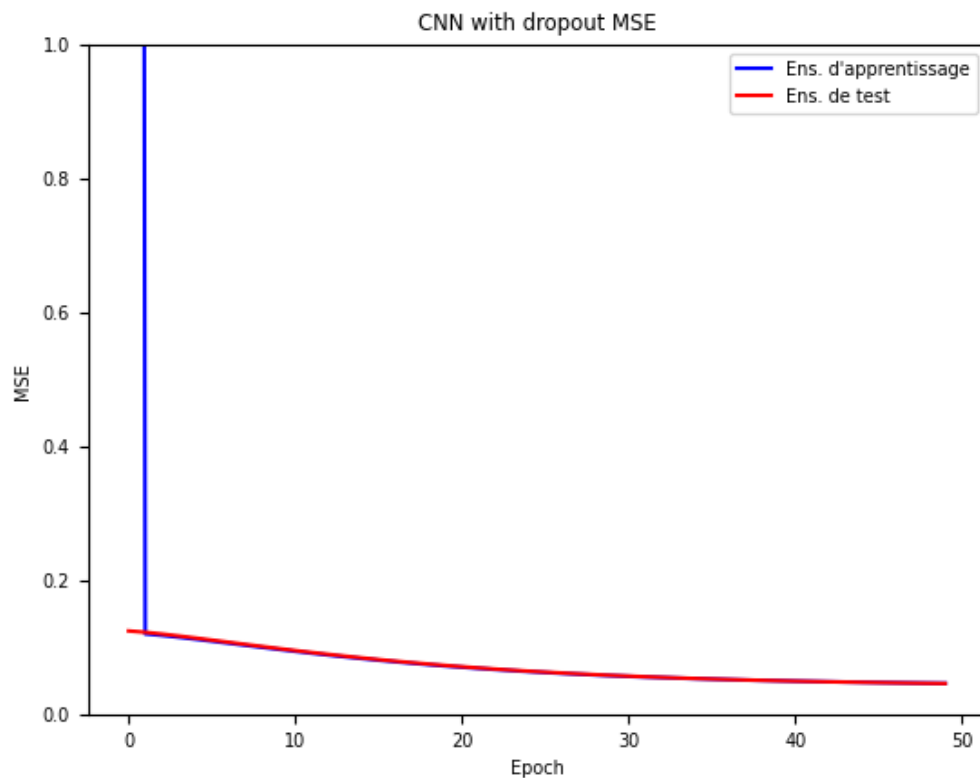
loss: 0.0438 - mae: 0.1668 - val_loss: 0.0433 - val_mae: 0.164

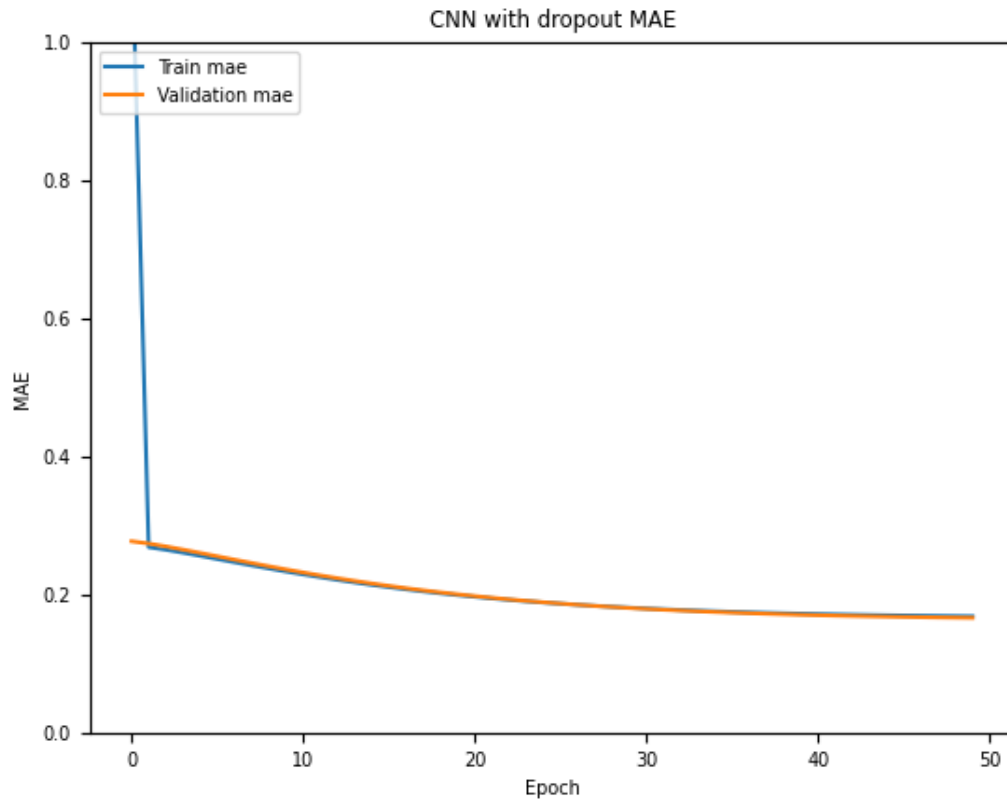


CNN with dropout

Layer (type)	Output Shape	Param #
conv2d_2 (Conv2D)	(None, 222, 222, 16)	448
max_pooling2d_2 (MaxPooling 2D)	(None, 111, 111, 16)	0
dropout (Dropout)	(None, 111, 111, 16)	0
conv2d_3 (Conv2D)	(None, 109, 109, 32)	4640
max_pooling2d_3 (MaxPooling 2D)	(None, 54, 54, 32)	0
dropout_1 (Dropout)	(None, 54, 54, 32)	0
flatten_1 (Flatten)	(None, 93312)	0
dense_2 (Dense)	(None, 512)	47776256
dense_3 (Dense)	(None, 200)	102600
Total params: 47,883,944		
Trainable params: 47,883,944		
Non-trainable params: 0		

loss: 0.0459 - mae: 0.1684 - val_loss: 0.0456 - val_mae: 0.1661

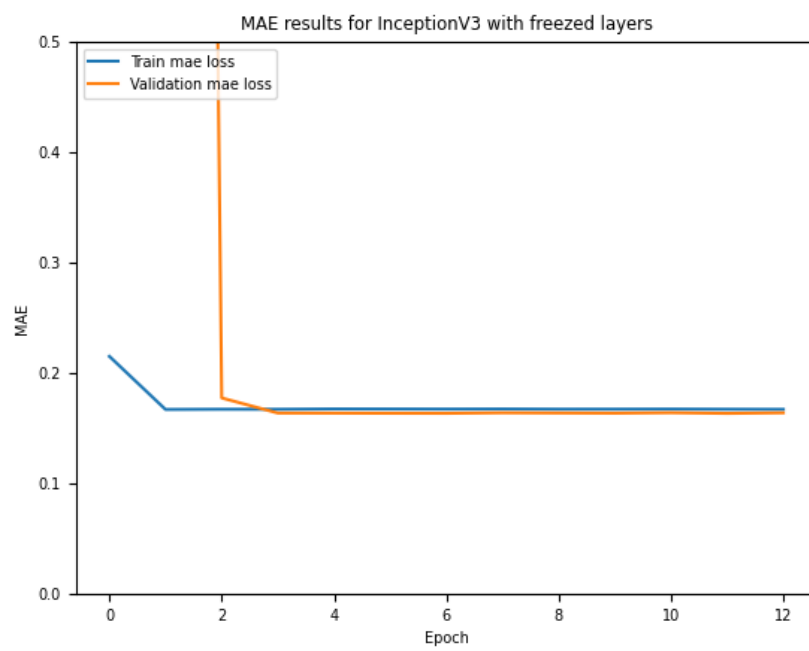
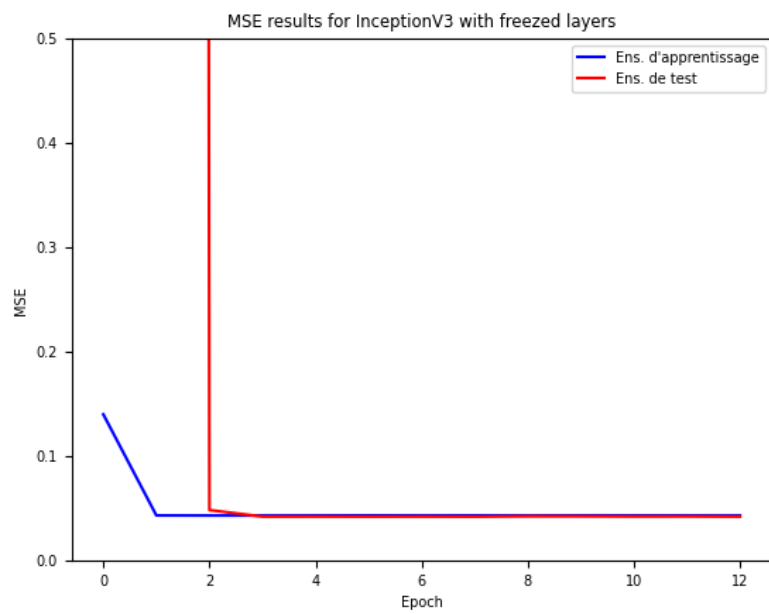




InceptionV3 with freezed layers

Layer (type)	Output Shape	Param #
inception_v3 (Functional)	(None, 5, 5, 2048)	21802784
global_average_pooling2d_6 (GlobalAveragePooling2D)	(None, 2048)	0
dense_16 (Dense)	(None, 200)	409800
dense_17 (Dense)	(None, 200)	40200
Total params: 22,252,784		
Trainable params: 20,076,368		
Non-trainable params: 2,176,416		

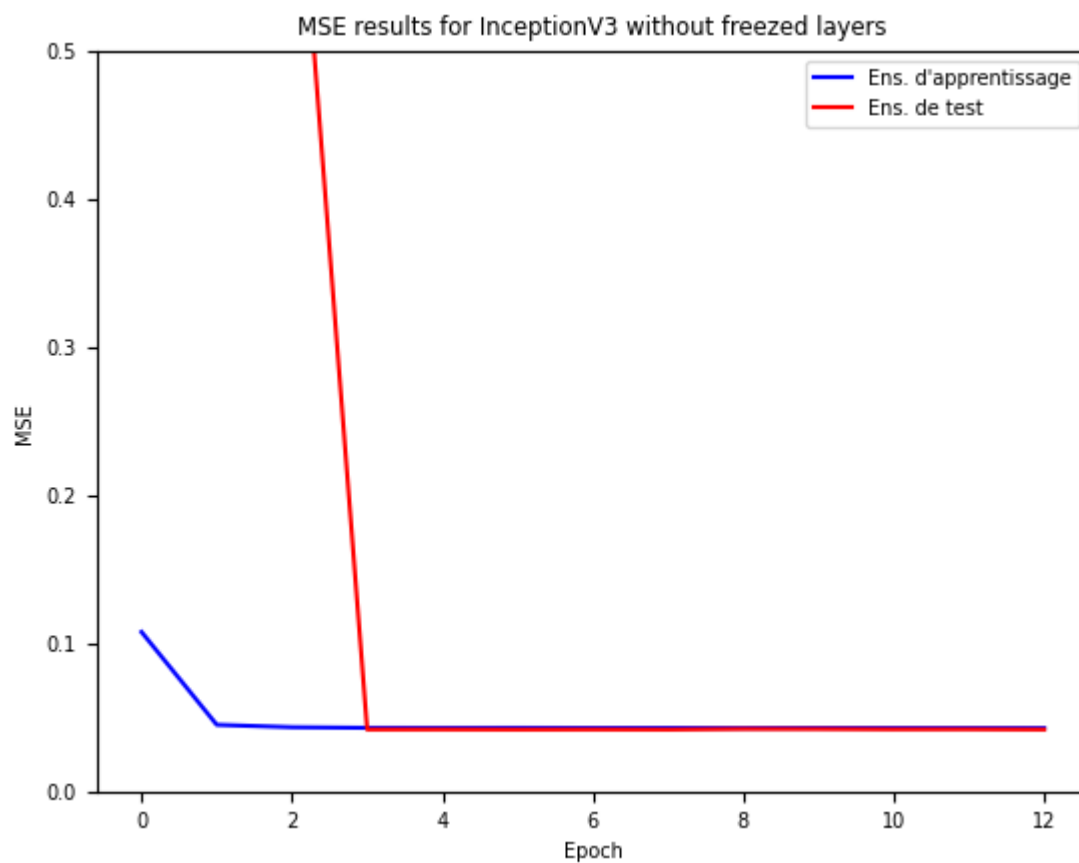
loss: 0.0427 - mae: 0.1669 - val_loss: 0.0418 - val_mae: 0.1638

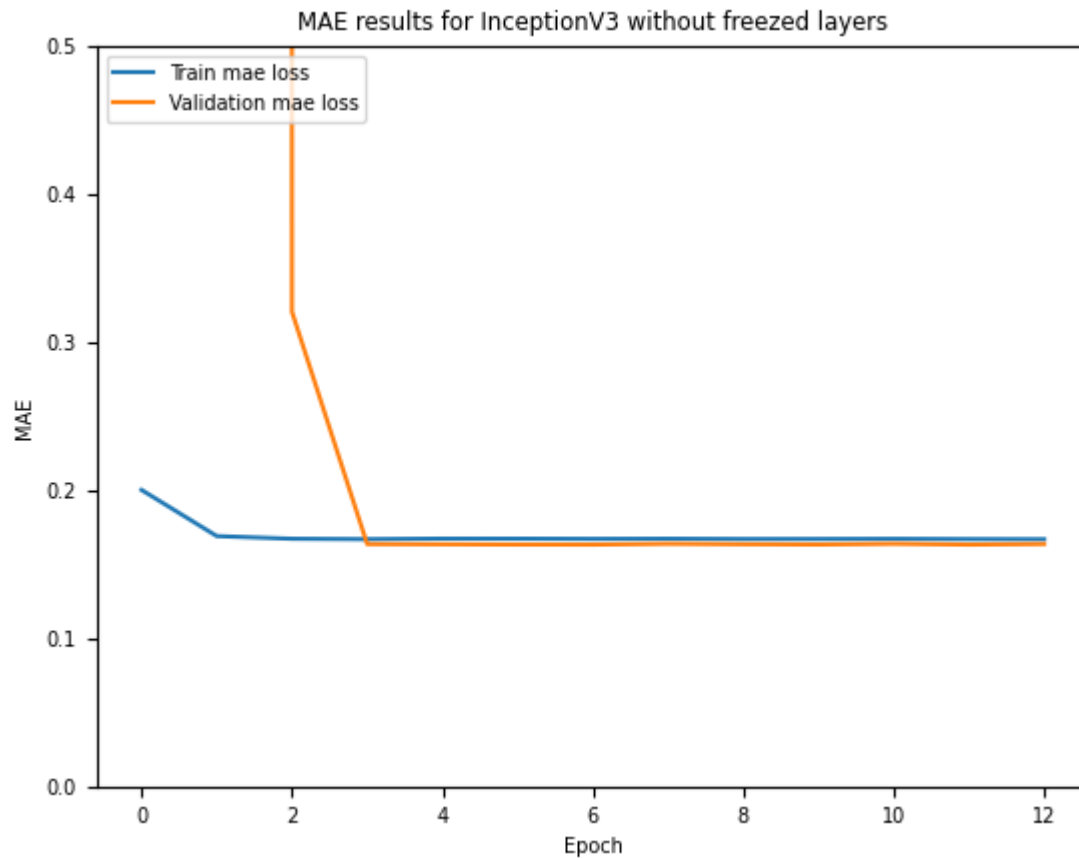


InceptionV3 without freezed layers

Layer (type)	Output Shape	Param #
inception_v3 (Functional)	(None, 5, 5, 2048)	21802784
global_average_pooling2d_5 (GlobalAveragePooling2D)	(None, 2048)	0
dense_14 (Dense)	(None, 200)	409800
dense_15 (Dense)	(None, 200)	40200
Total params: 22,252,784		
Trainable params: 22,218,352		
Non-trainable params: 34,432		

loss: 0.0427 - mae: 0.1669 - val_loss: 0.0418 - val_mae: 0.1637

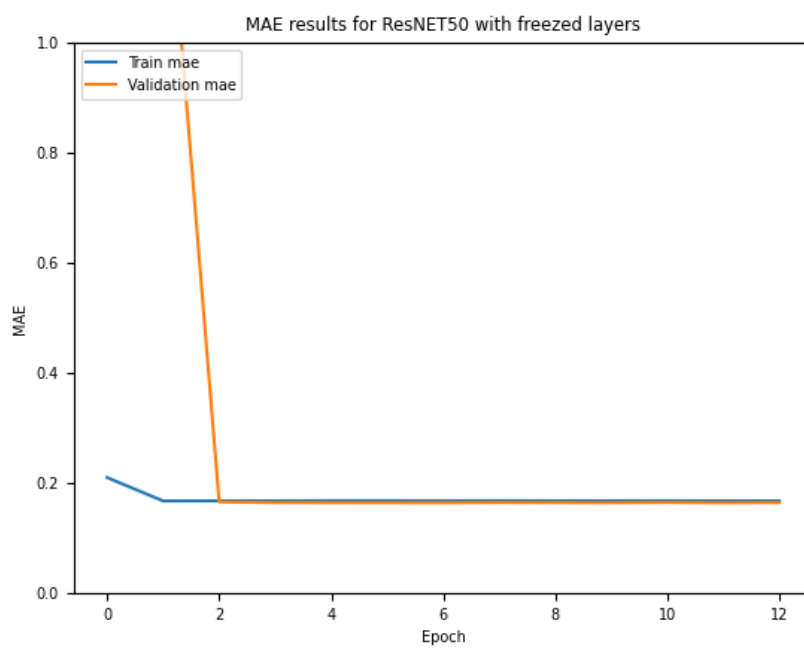
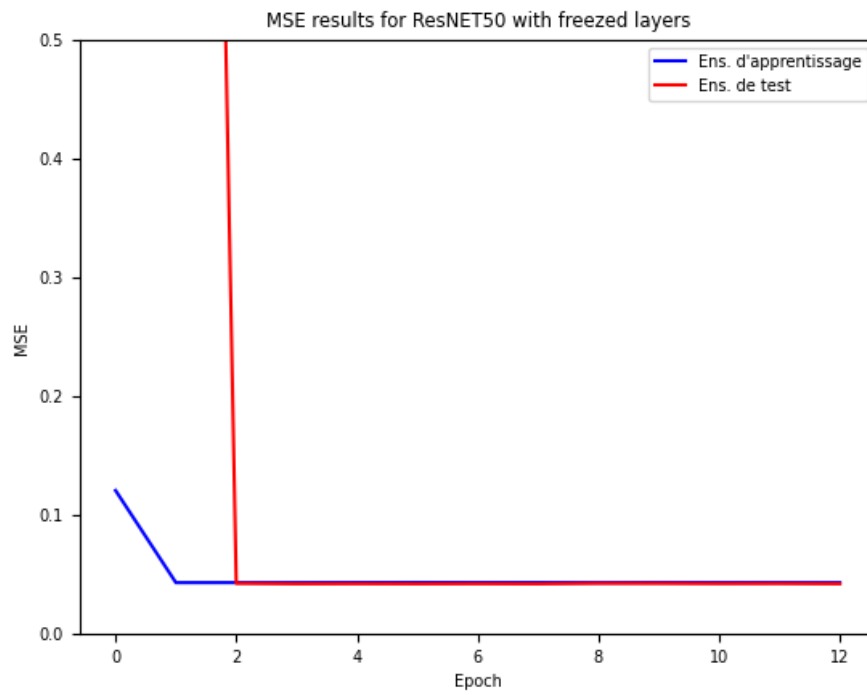




Resnet50 with freezed layers

Layer (type)	Output Shape	Param #
resnet50 (Functional)	(None, 7, 7, 2048)	23587712
global_average_pooling2d_7 (GlobalAveragePooling2D)	(None, 2048)	0
dense_18 (Dense)	(None, 200)	409800
dense_19 (Dense)	(None, 200)	40200
Total params: 24,037,712		
Trainable params: 19,902,928		
Non-trainable params: 4,134,784		

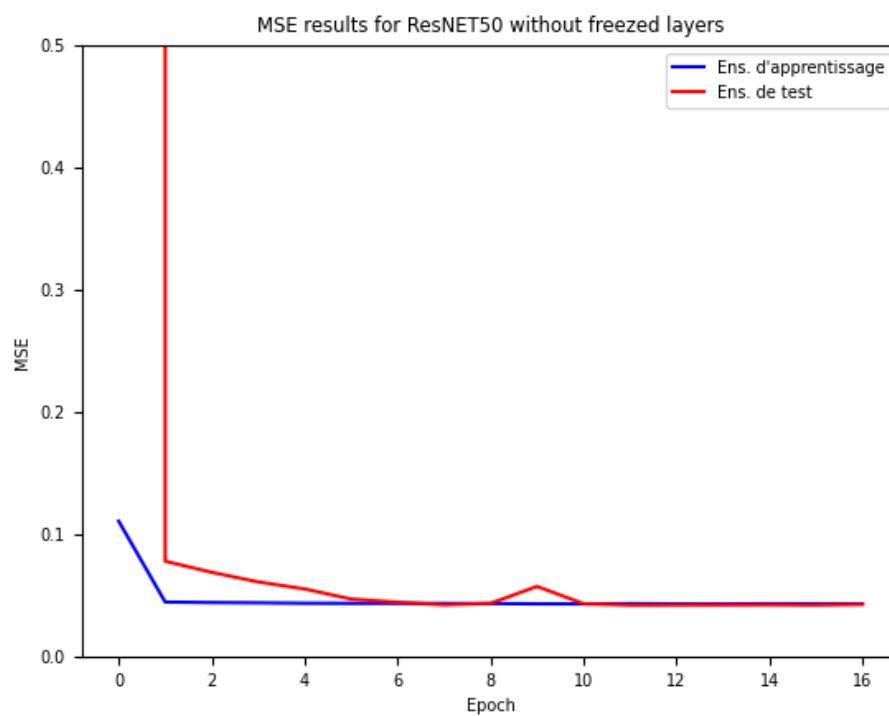
loss: 0.0427 - mae: 0.1669 - val_loss: 0.0418 - val_mae: 0.1637

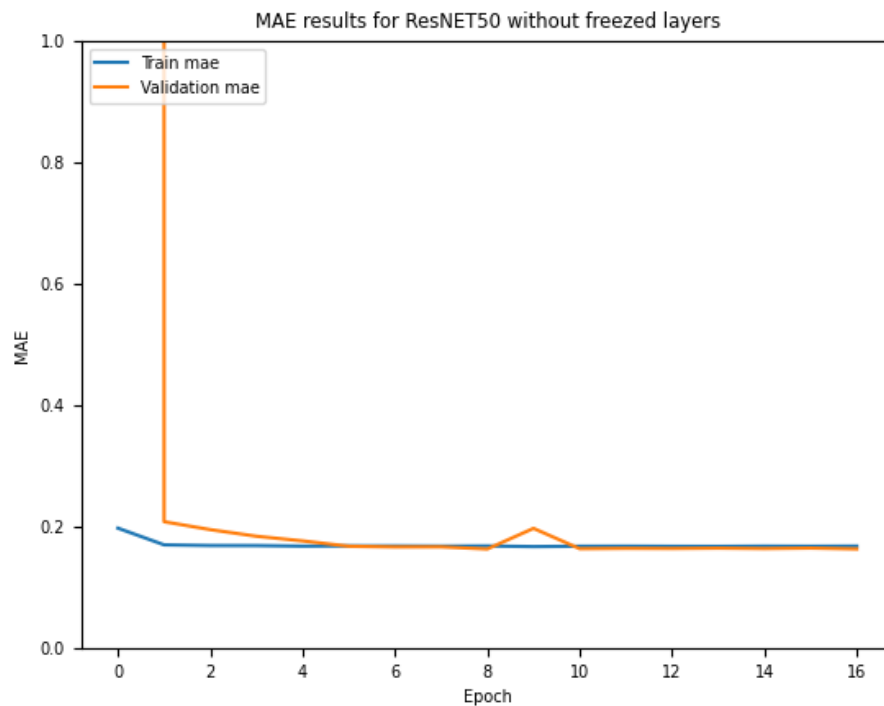


Resnet50 without freezed layers

Layer (type)	Output Shape	Param #
resnet50 (Functional)	(None, 7, 7, 2048)	23587712
global_average_pooling2d_8 (GlobalAveragePooling2D)	(None, 2048)	0
dense_20 (Dense)	(None, 200)	409800
dense_21 (Dense)	(None, 200)	40200
Total params: 24,037,712		
Trainable params: 23,984,592		
Non-trainable params: 53,120		

loss: 0.0429 - mae: 0.1674 - val_loss: 0.0424 - val_mae: 0.1628

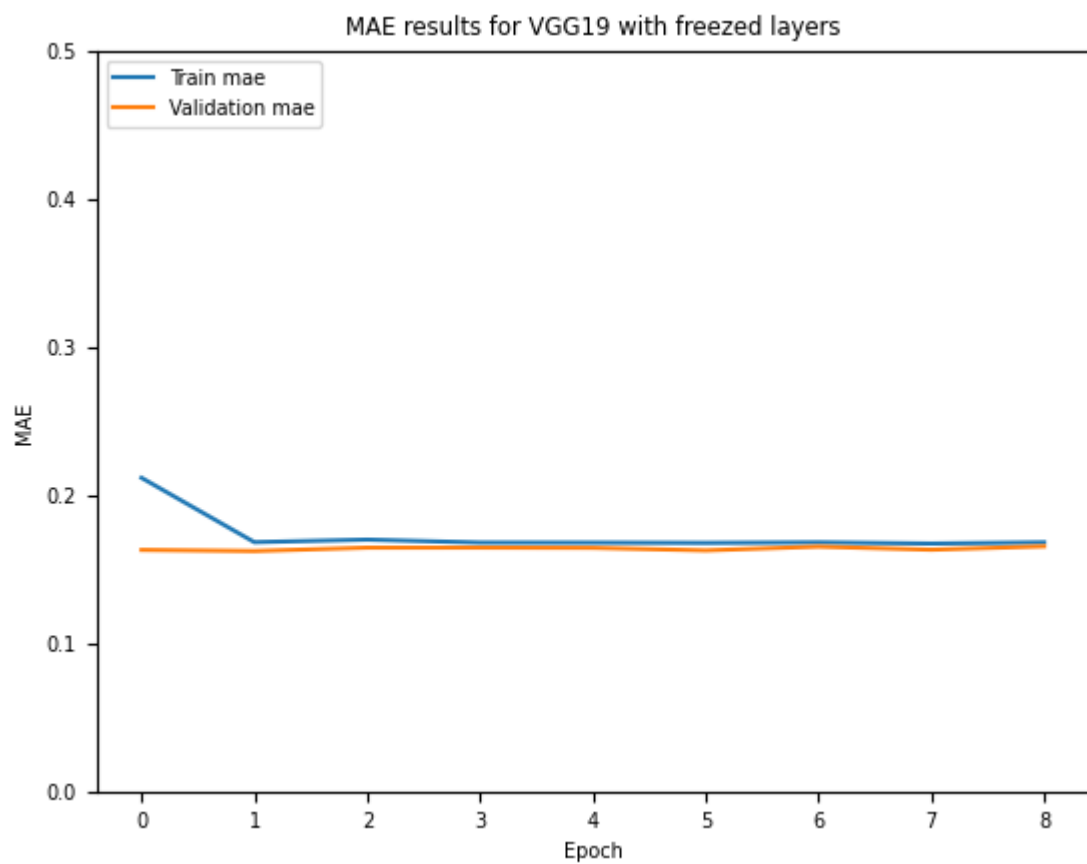
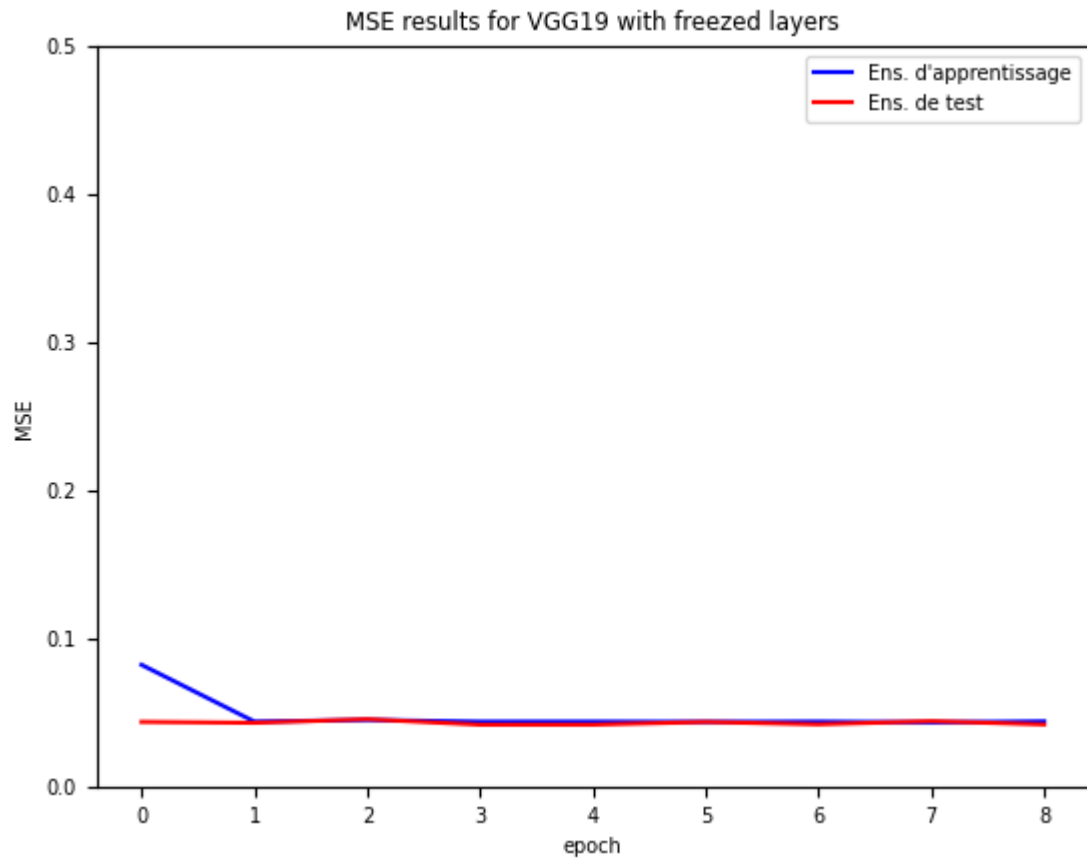




VGG19 with freezed layers

Layer (type)	Output Shape	Param #
=====	=====	=====
vgg19 (Functional)	(None, 7, 7, 512)	20024384
flatten (Flatten)	(None, 25088)	0
dense_4 (Dense)	(None, 200)	5017800
dense_5 (Dense)	(None, 200)	40200
=====	=====	=====
Total params: 25,082,384		
Trainable params: 16,857,040		
Non-trainable params: 8,225,344		

loss: 0.0439 - mae: 0.1682 - val_loss: 0.0418 - val_mae: 0.1655



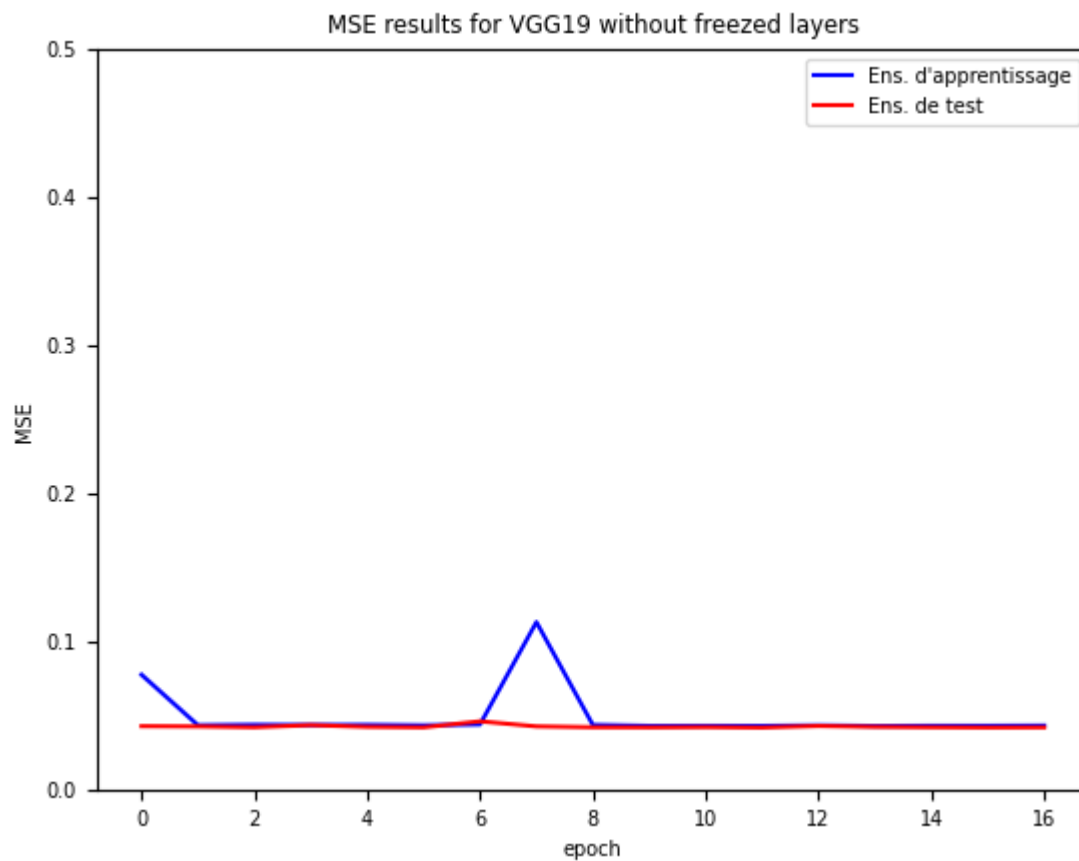
VGG19 without freezed layers

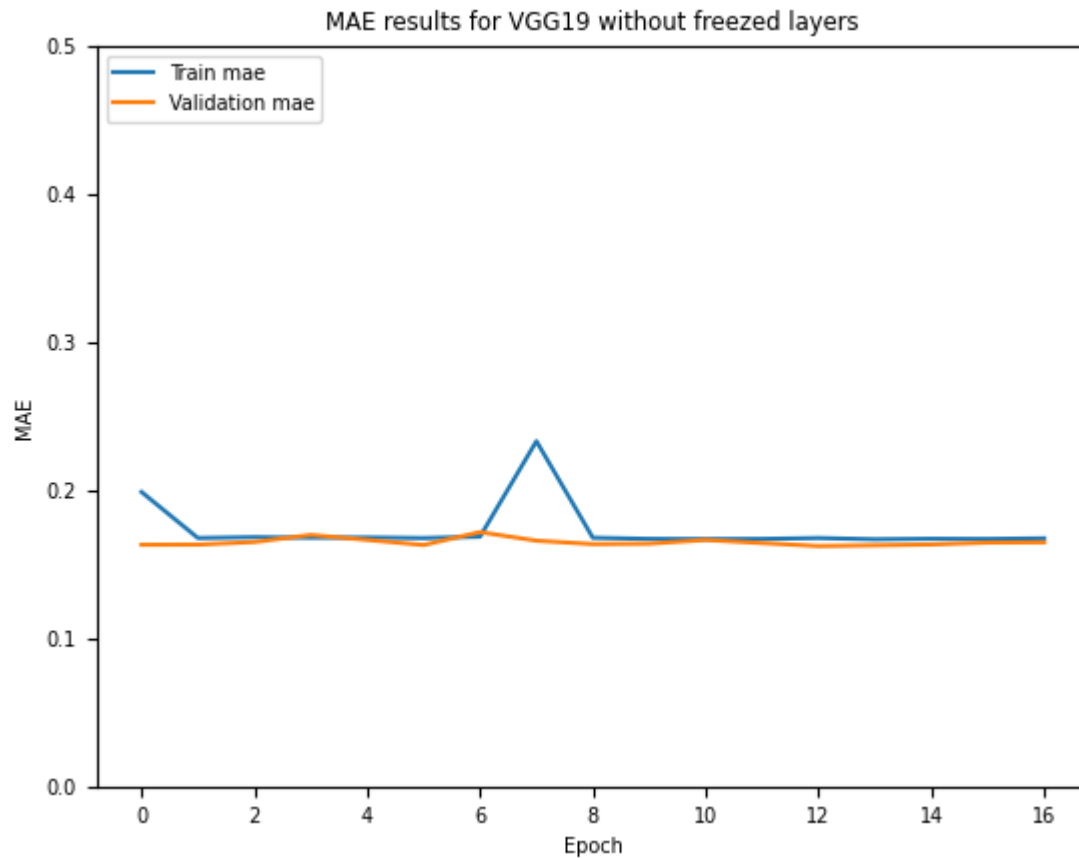
Layer (type)	Output Shape	Param #
vgg19 (Functional)	(None, 7, 7, 512)	20024384
flatten (Flatten)	(None, 25088)	0
dense (Dense)	(None, 200)	5017800
dense_1 (Dense)	(None, 200)	40200

=====

Total params: 25,082,384
Trainable params: 25,082,384
Non-trainable params: 0

loss: 0.0431 - mae: 0.1676 - val_loss: 0.0419 - val_mae: 0.1649

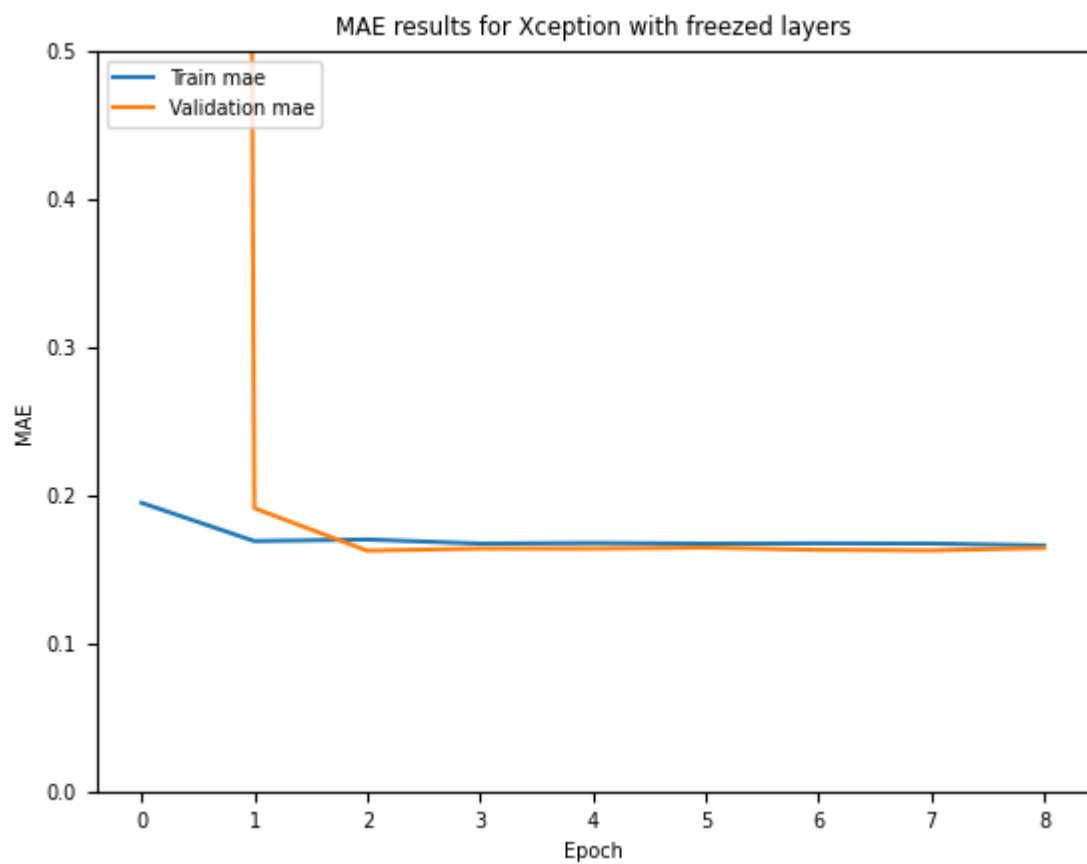
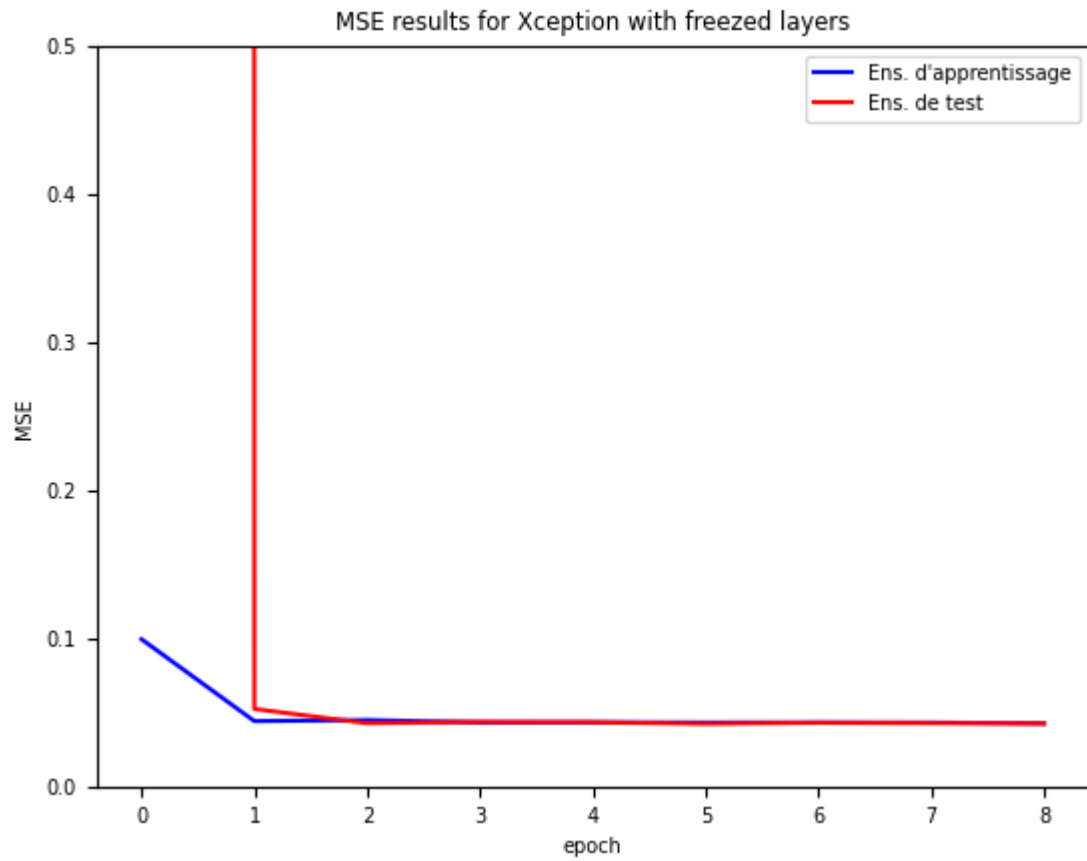




Xception with freezed layers

Layer (type)	Output Shape	Param #
xception (Functional)	(None, 7, 7, 2048)	20861480
global_average_pooling2d (GlobalAveragePooling2D)	(None, 2048)	0
dense (Dense)	(None, 200)	409800
dense_1 (Dense)	(None, 200)	40200
Total params: 21,311,480		
Trainable params: 21,228,440		
Non-trainable params: 83,040		

loss: 0.0425 - mae: 0.1661 - val_loss: 0.0425 - val_mae: 0.1643



Xception without freezed layers

Layer (type)	Output Shape	Param #
xception (Functional)	(None, 7, 7, 2048)	20861480
global_average_pooling2d (GlobalAveragePooling2D)	(None, 2048)	0
dense (Dense)	(None, 200)	409800
dense_1 (Dense)	(None, 200)	40200
Total params: 21,311,480		
Trainable params: 21,256,952		
Non-trainable params: 54,528		

loss: 0.0429 - mae: 0.1676 - val_loss: 0.0422 - val_mae: 0.1626

