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conv2d (Conv2D) (None, 298, 298, 16) 448

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max\_pooling2d (MaxPooling2D) (None, 149, 149, 16) 0

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conv2d\_1 (Conv2D) (None, 147, 147, 32) 4640

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max\_pooling2d\_1 (MaxPooling2 (None, 73, 73, 32) 0

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conv2d\_2 (Conv2D) (None, 71, 71, 64) 18496

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max\_pooling2d\_2 (MaxPooling2 (None, 35, 35, 64) 0

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conv2d\_3 (Conv2D) (None, 33, 33, 128) 73856

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max\_pooling2d\_3 (MaxPooling2 (None, 16, 16, 128) 0

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conv2d\_4 (Conv2D) (None, 14, 14, 256) 295168

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max\_pooling2d\_4 (MaxPooling2 (None, 7, 7, 256) 0

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global\_average\_pooling2d (Gl (None, 256) 0

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dense (Dense) (None, 128) 32896

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dense\_1 (Dense) (None, 64) 8256

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dense\_2 (Dense) (None, 1) 65

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All filters are (3,3)

Total params: 433,825

Trainable params: 433,825

Non-trainable params: 0

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(None, 300, 300, 3)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Batch size | epochs | Optimizer | UnderFit | OverFit | Aug |
| 8 | 20 | Adam | No | No | Yes |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Val | Loss | Acc | Recall | precision | specificity |
| 0.2503 | 0.9049 | 0.8784 | 0.9203 | 0.9221 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Train | Loss | Acc | Recall | precision | specificity |
| 0.2266 | 0.9007 | 0.9069 | 0.8964 | 0. 8824 |

Layer (type) Output Shape Param #

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conv2d (Conv2D) (None, 298, 298, 16) 448

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max\_pooling2d (MaxPooling2D) (None, 149, 149, 16) 0

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conv2d\_1 (Conv2D) (None, 147, 147, 16) 2320

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max\_pooling2d\_1 (MaxPooling2 (None, 73, 73, 16) 0

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conv2d\_2 (Conv2D) (None, 71, 71, 16) 2320

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max\_pooling2d\_2 (MaxPooling2 (None, 35, 35, 16) 0

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conv2d\_3 (Conv2D) (None, 33, 33, 16) 2320

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max\_pooling2d\_3 (MaxPooling2 (None, 16, 16, 16) 0

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conv2d\_4 (Conv2D) (None, 14, 14, 16) 2320

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max\_pooling2d\_4 (MaxPooling2 (None, 7, 7, 16) 0

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conv2d\_5 (Conv2D) (None, 5, 5, 16) 2320

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flatten (Flatten) (None, 400) 0

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dense (Dense) (None, 256) 102656

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dense\_1 (Dense) (None, 64) 16448

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dense\_2 (Dense) (None, 1) 65

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All filters are (3,3)

Total params: 131,217

Trainable params: 131,217

Non-trainable params: 0

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| --- | --- | --- | --- | --- | --- |
| Batch size | epochs | Optimizer | UnderFit | OverFit | Aug |
| 8 | 20 | Adam | No | No | No |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Val | Loss | Acc | Recall | precision | specificity |
| 0.3009 | 0.8901 | 0.8939 | 0.8858 | 0.8767 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Train | Loss | Acc | Recall | precision | specificity |
| 0.1610 | 0.9303 | 0.9378 | 0.9284 | 0.9109 |

Layer (type) Output Shape Param #

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conv2d (Conv2D) (None, 298, 298, 16) 448

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max\_pooling2d (MaxPooling2D) (None, 149, 149, 16) 0

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conv2d\_1 (Conv2D) (None, 147, 147, 16) 2320

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max\_pooling2d\_1 (MaxPooling2 (None, 73, 73, 16) 0

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conv2d\_2 (Conv2D) (None, 71, 71, 16) 2320

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max\_pooling2d\_2 (MaxPooling2 (None, 35, 35, 16) 0

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conv2d\_3 (Conv2D) (None, 33, 33, 16) 2320

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max\_pooling2d\_3 (MaxPooling2 (None, 16, 16, 16) 0

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conv2d\_4 (Conv2D) (None, 14, 14, 16) 2320

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max\_pooling2d\_4 (MaxPooling2 (None, 7, 7, 16) 0

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conv2d\_5 (Conv2D) (None, 5, 5, 16) 2320

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flatten (Flatten) (None, 400) 0

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dense (Dense) (None, 256) 102656

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dense\_1 (Dense) (None, 64) 16448

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dense\_2 (Dense) (None, 1) 65

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All filters are (3,3)

Total params: 131,217

Trainable params: 131,217

Non-trainable params: 0

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Batch size | epochs | Optimizer | UnderFit | OverFit | Aug |
| 16 | 20 | Adam | No | No | Yes |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Val | Loss | Acc | Recall | precision | specificity |
| 0.2214 | 0. 9029 | 0. 9351 | 0. 8954 | 0. 8693 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Train | Loss | Acc | Recall | precision | specificity |
| 0. 2457 | 0. 8921 | 0. 9088 | 0. 8876 | 0. 9088 |