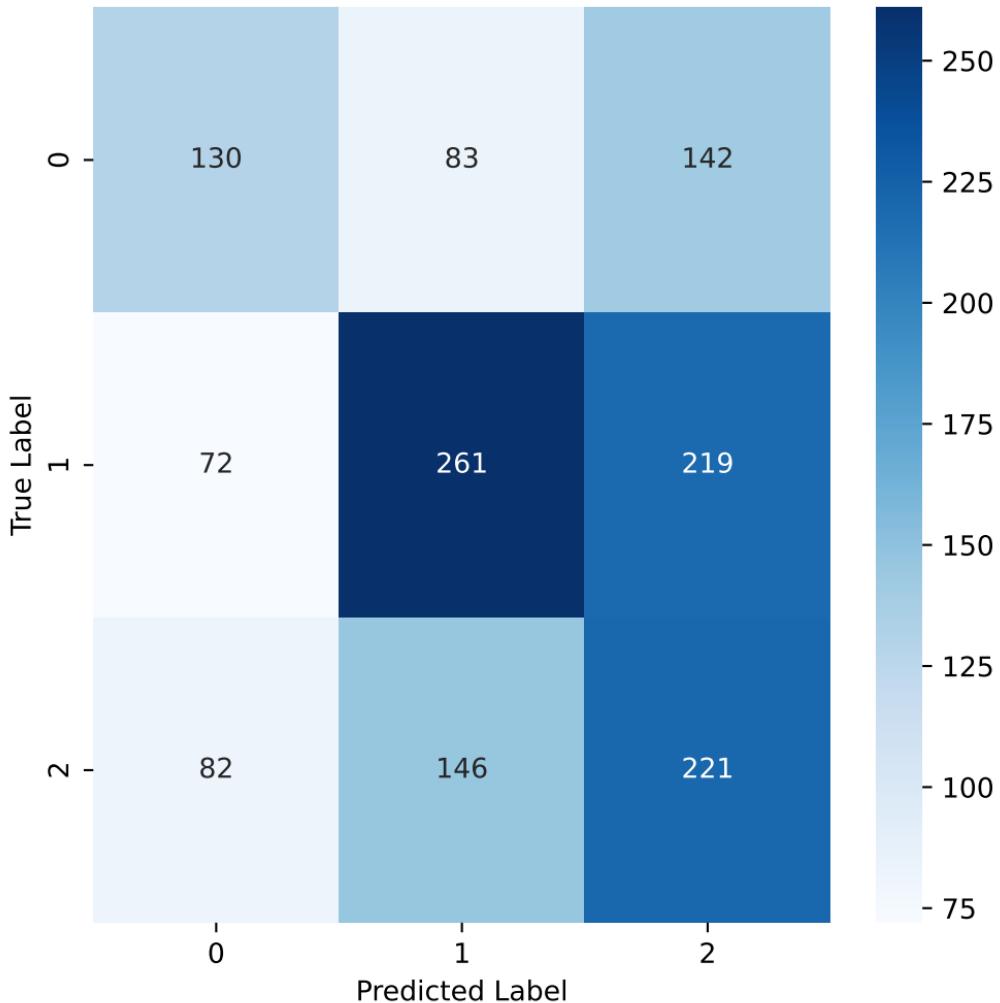


### Confusion Matrix - Sumatra



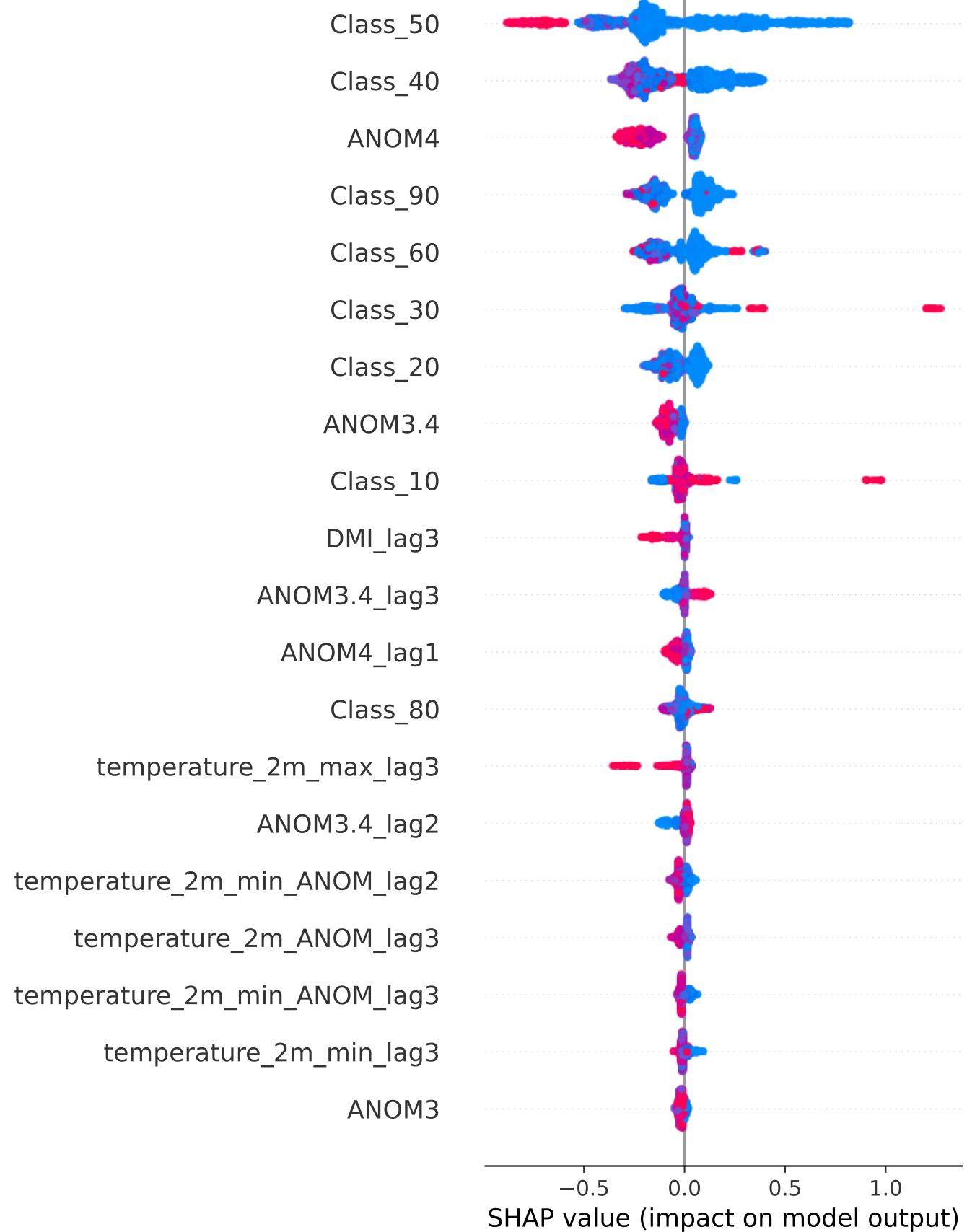
SHAP Beeswarm Plot for Class 0 - Sumatra

High

Feature value

Low

SHAP value (impact on model output)



SHAP Beeswarm Plot for Class 1 - Sumatra

High

Feature value

Low

SHAP value (impact on model output)

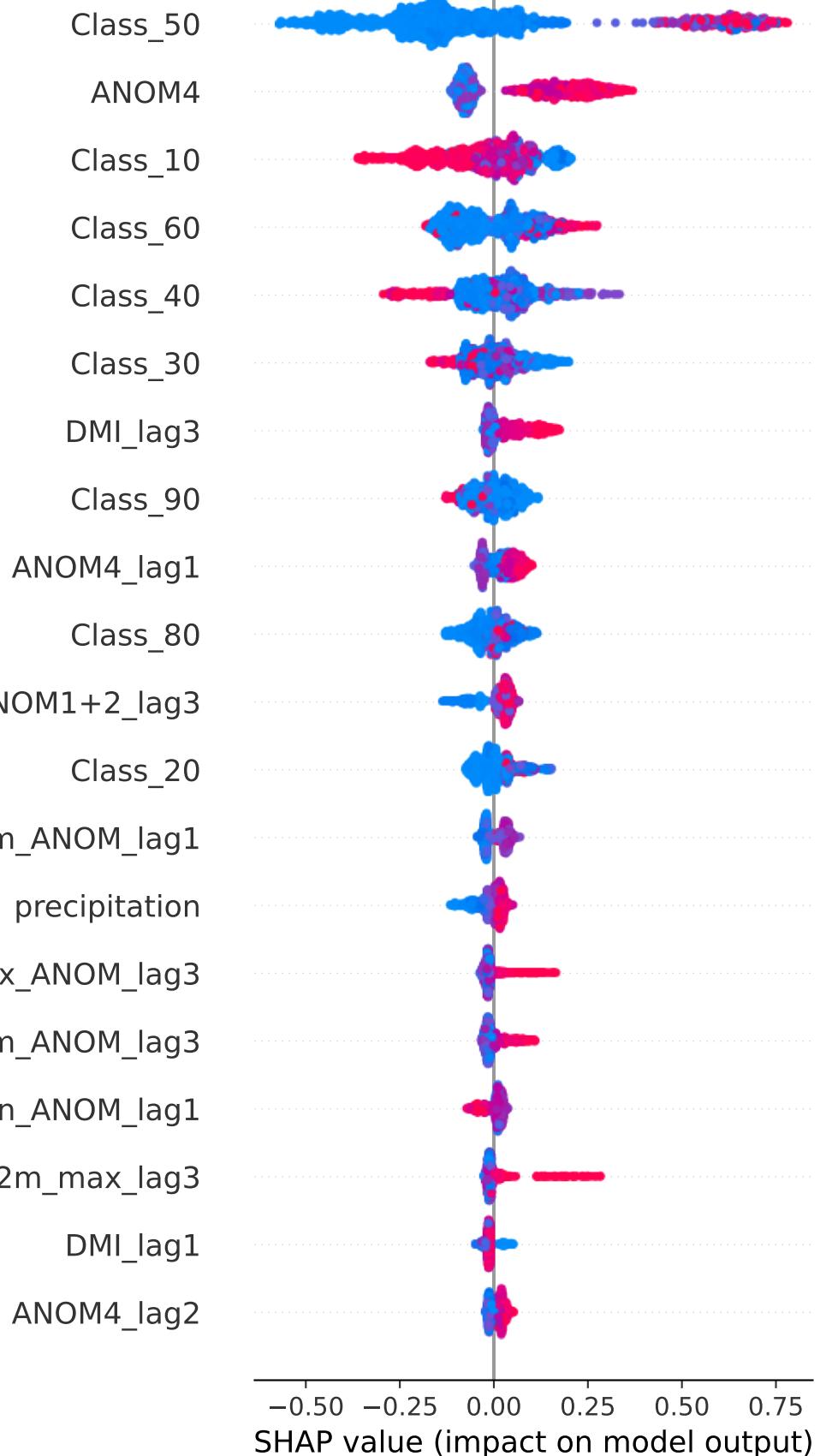
Class\_90  
Class\_80  
Class\_40  
Class\_50  
Class\_10  
temperature\_2m\_max  
temperature\_2m\_max\_lag1  
Class\_30  
temperature\_2m\_min\_lag3  
Class\_60  
ANOM3.4\_lag3  
temperature\_2m\_min  
temperature\_2m\_max\_ANOM  
temperature\_2m\_lag3  
ANOM3.4\_lag2  
ANOM1+2\_lag3  
precipitation\_lag3  
precipitation\_lag2  
Class\_20  
precipitation

SHAP Beeswarm Plot for Class 2 - Sumatra

High

Feature value

Low



# SHAP Dependence Plot for Class\_50, Class 0 - Sumatra

SHAP value for  
Class\_50

0.75

0.50

0.25

0.00

-0.25

-0.50

-0.75

0.0

0.1

0.2

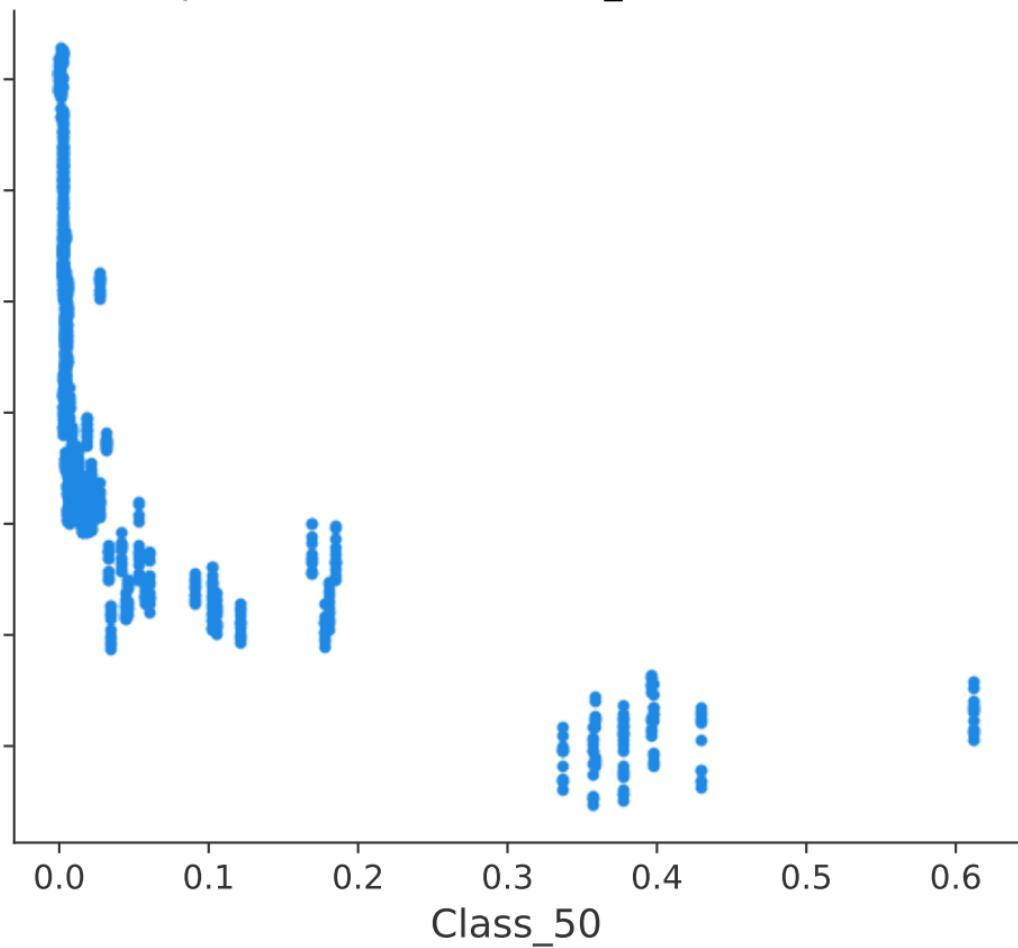
0.3

0.4

0.5

0.6

Class\_50



# SHAP Dependence Plot for Class\_50, Class 1 - Sumatra

SHAP value for  
Class\_50

0.10

0.05

0.00

-0.05

-0.10

-0.15

-0.20

-0.25

0.0

0.1

0.2

0.3

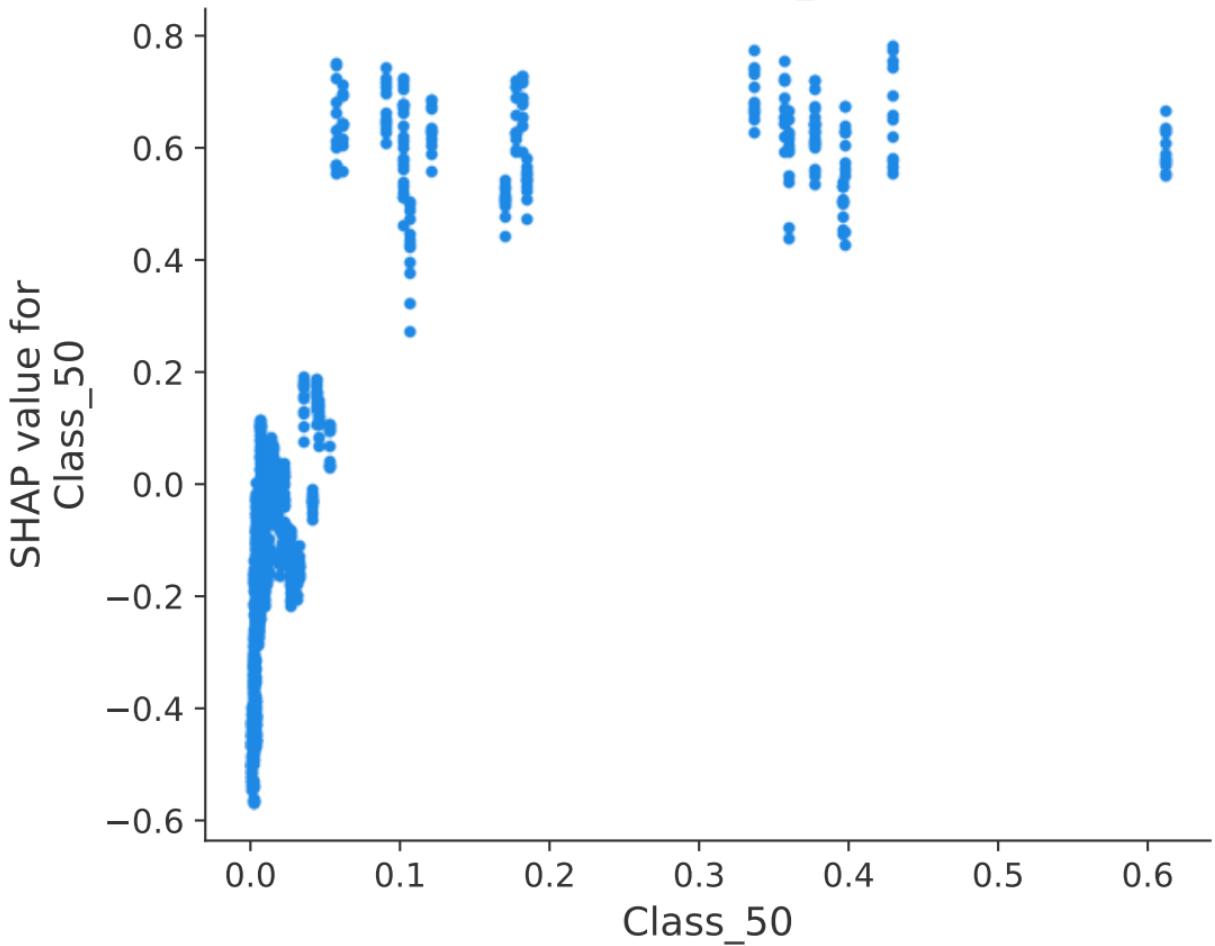
0.4

0.5

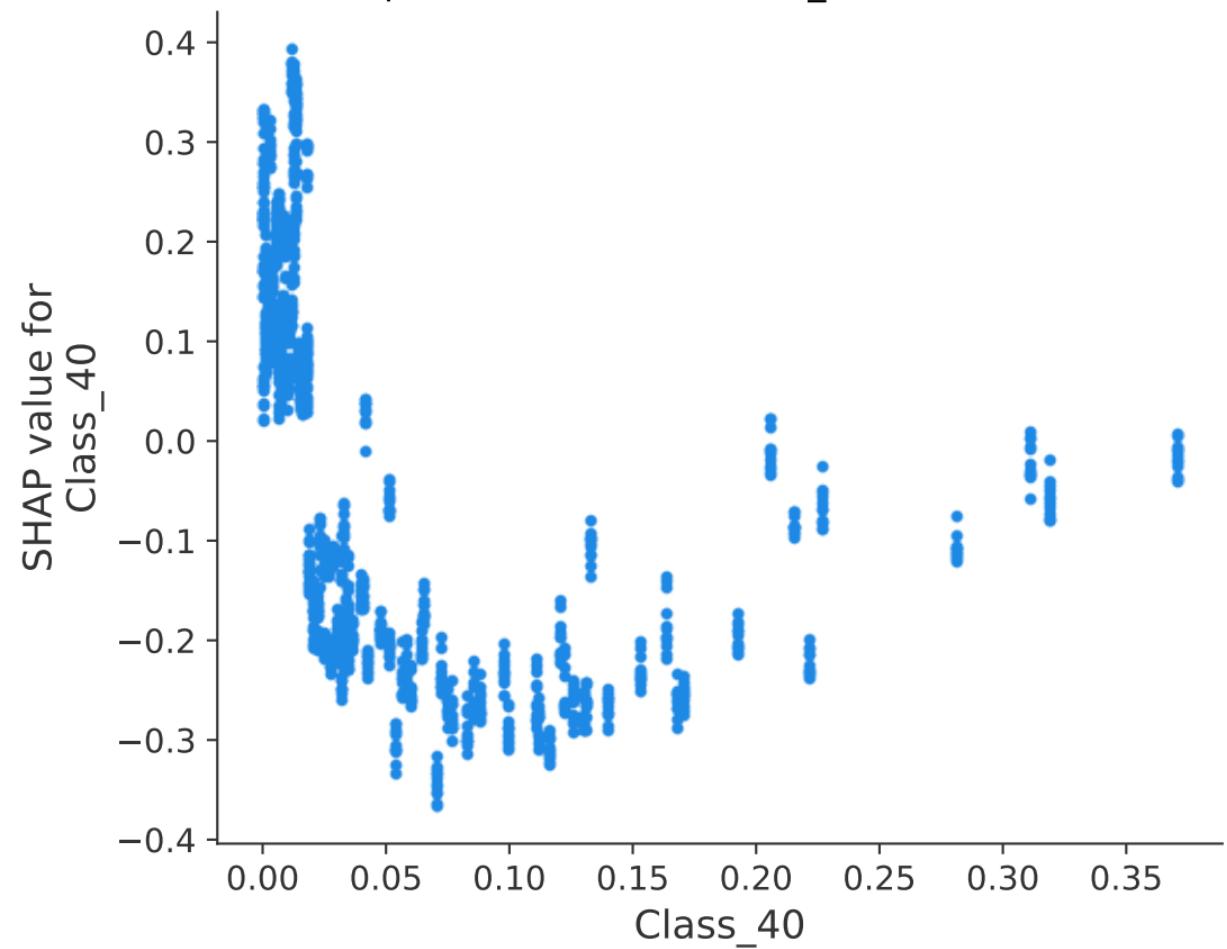
0.6

Class\_50

# SHAP Dependence Plot for Class\_50, Class 2 - Sumatra



# SHAP Dependence Plot for Class\_40, Class 0 - Sumatra



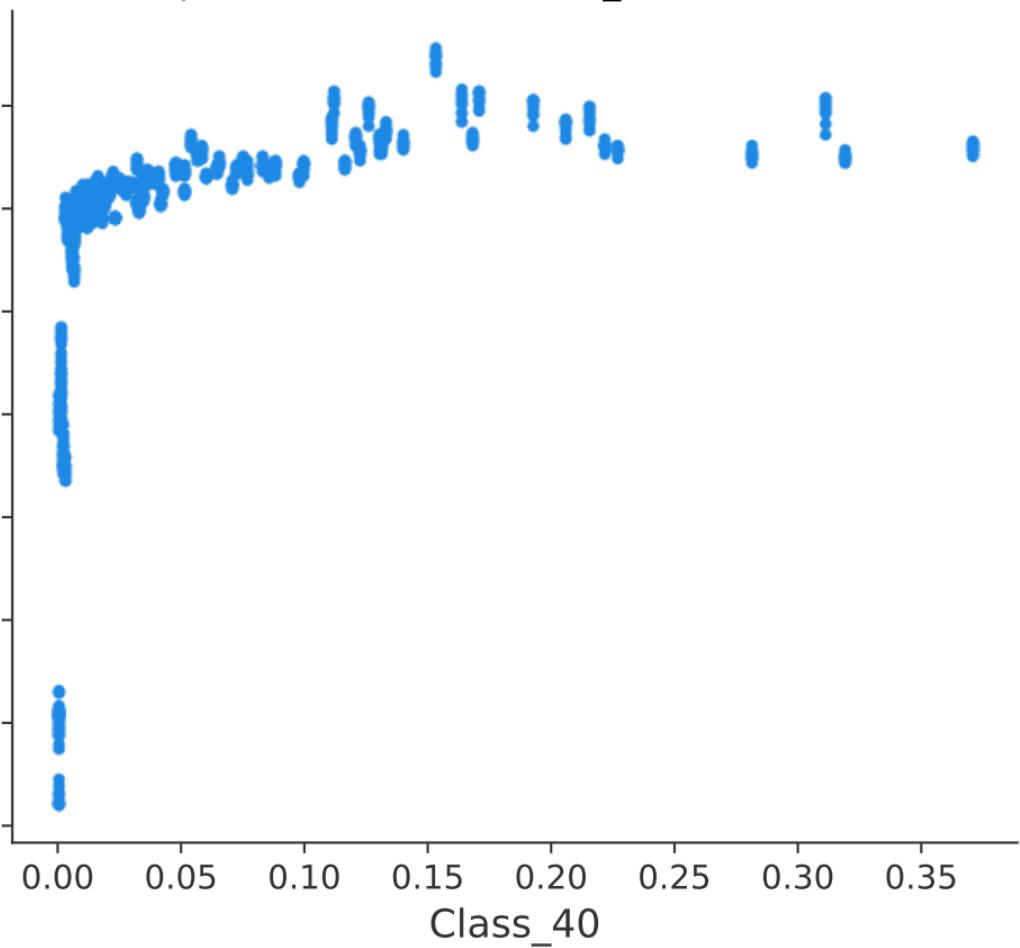
# SHAP Dependence Plot for Class\_40, Class 1 - Sumatra

SHAP value for  
Class\_40

0.1  
0.0  
-0.1  
-0.2  
-0.3  
-0.4  
-0.5  
-0.6

0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35

Class\_40



# SHAP Dependence Plot for Class\_40, Class 2 - Sumatra

SHAP value for  
Class\_40

0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35

Class\_40

0.3

0.2

0.1

0.0

-0.1

-0.2

-0.3

# SHAP Dependence Plot for ANOM4, Class 0 - Sumatra

SHAP value for  
ANOM4

0.1

0.0

-0.1

-0.2

-0.3

-0.50 -0.25 0.00 0.25 0.50 0.75 1.00 1.25 1.50

ANOM4

ANOM4

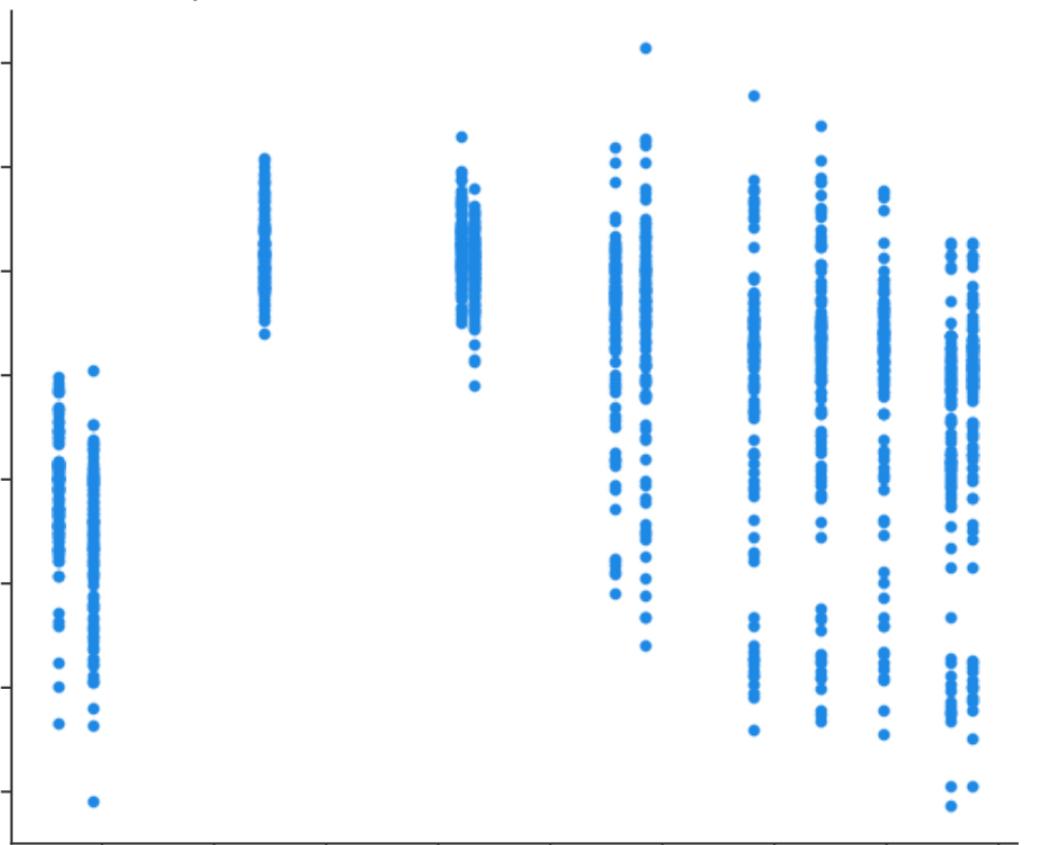
# SHAP Dependence Plot for ANOM4, Class 1 - Sumatra

SHAP value for  
ANOM4

-0.50 -0.25 0.00 0.25 0.50 0.75 1.00 1.25 1.50

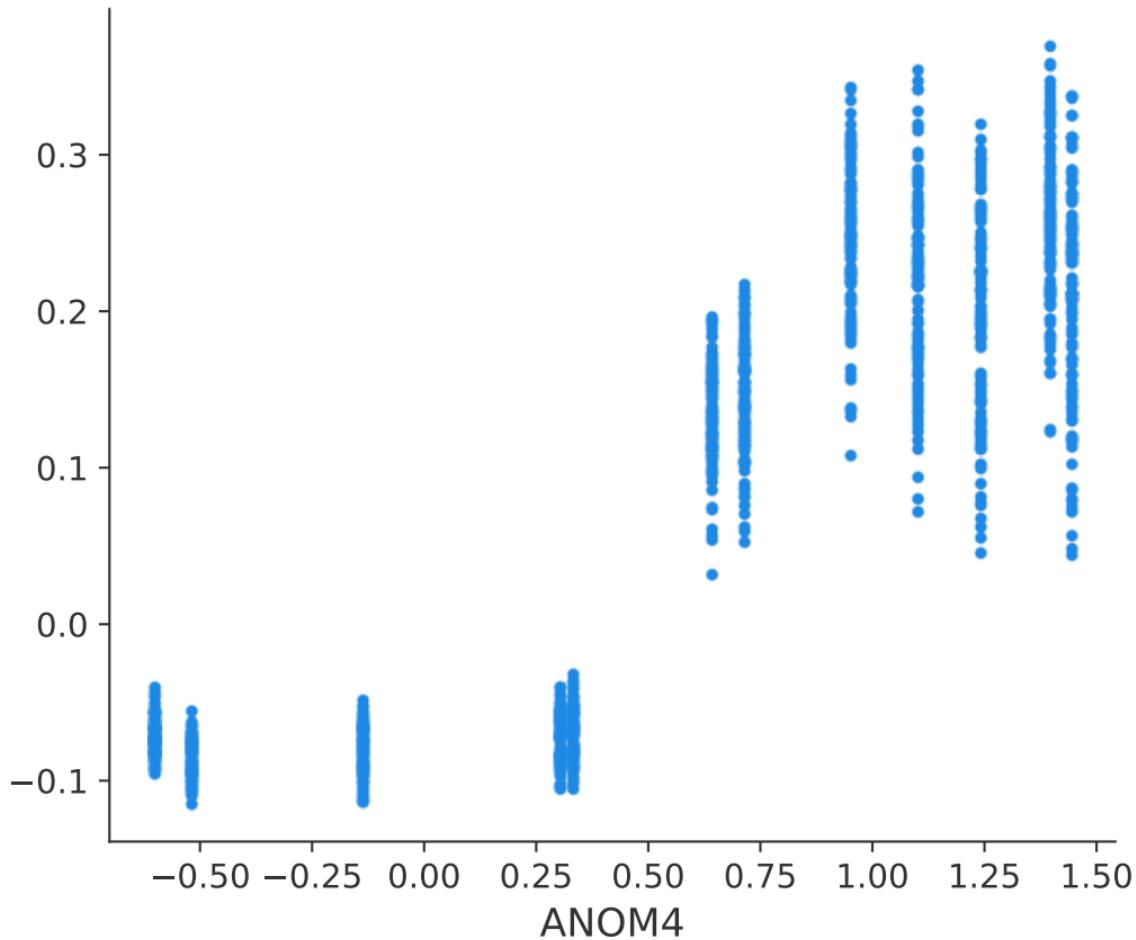
ANOM4

0.008  
0.006  
0.004  
0.002  
0.000  
-0.002  
-0.004  
-0.006



# SHAP Dependence Plot for ANOM4, Class 2 - Sumatra

SHAP value for  
ANOM4



# SHAP Dependence Plot for Class\_90, Class 0 - Sumatra

SHAP value for  
Class\_90

0.2

0.1

0.0

-0.1

-0.2

-0.3

0.000 0.002 0.004

0.006 0.008 0.010 0.012

Class\_90

0.000

0.002

0.004

0.006

0.008

0.010

0.012

0.014

0.016

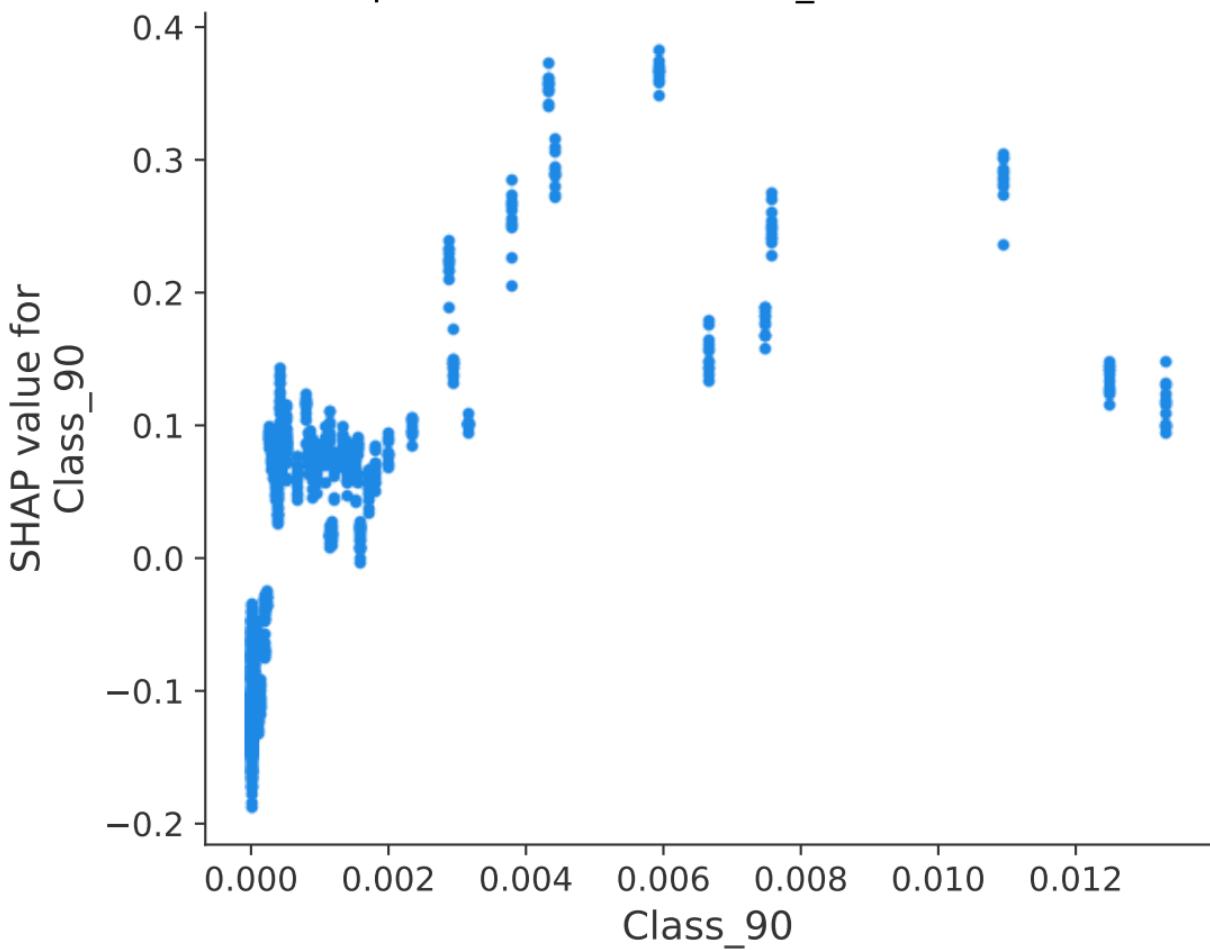
0.018

0.020

0.000 0.002 0.004 0.006 0.008 0.010 0.012

Class\_90

# SHAP Dependence Plot for Class\_90, Class 1 - Sumatra



# SHAP Dependence Plot for Class\_90, Class 2 - Sumatra

SHAP value for  
Class\_90

0.10

0.05

0.00

-0.05

-0.10

0.000 0.002 0.004 0.006 0.008 0.010 0.012

Class\_90

# SHAP Dependence Plot for Class\_60, Class 0 - Sumatra

SHAP value for  
Class\_60

0.4

0.3

0.2

0.1

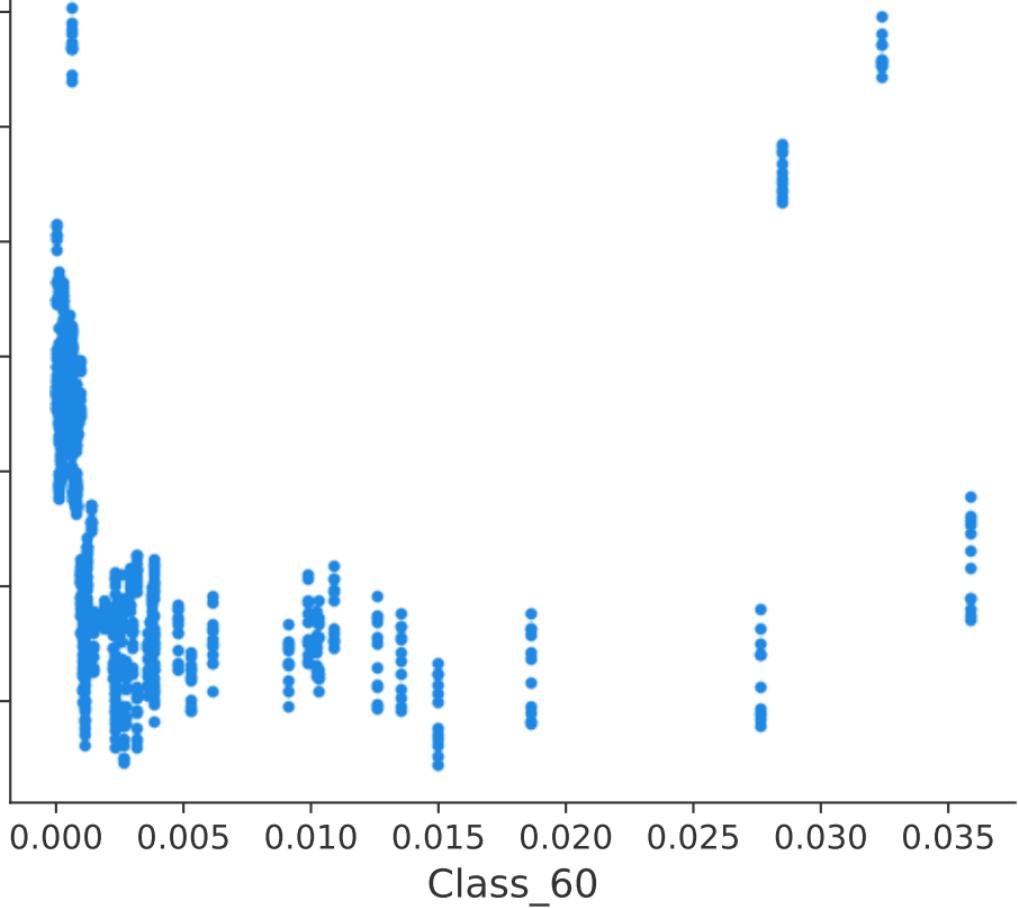
0.0

-0.1

-0.2

0.000 0.005 0.010 0.015 0.020 0.025 0.030 0.035

Class\_60



# SHAP Dependence Plot for Class\_60, Class 1 - Sumatra

SHAP value for  
Class\_60

0.05

0.00

-0.05

-0.10

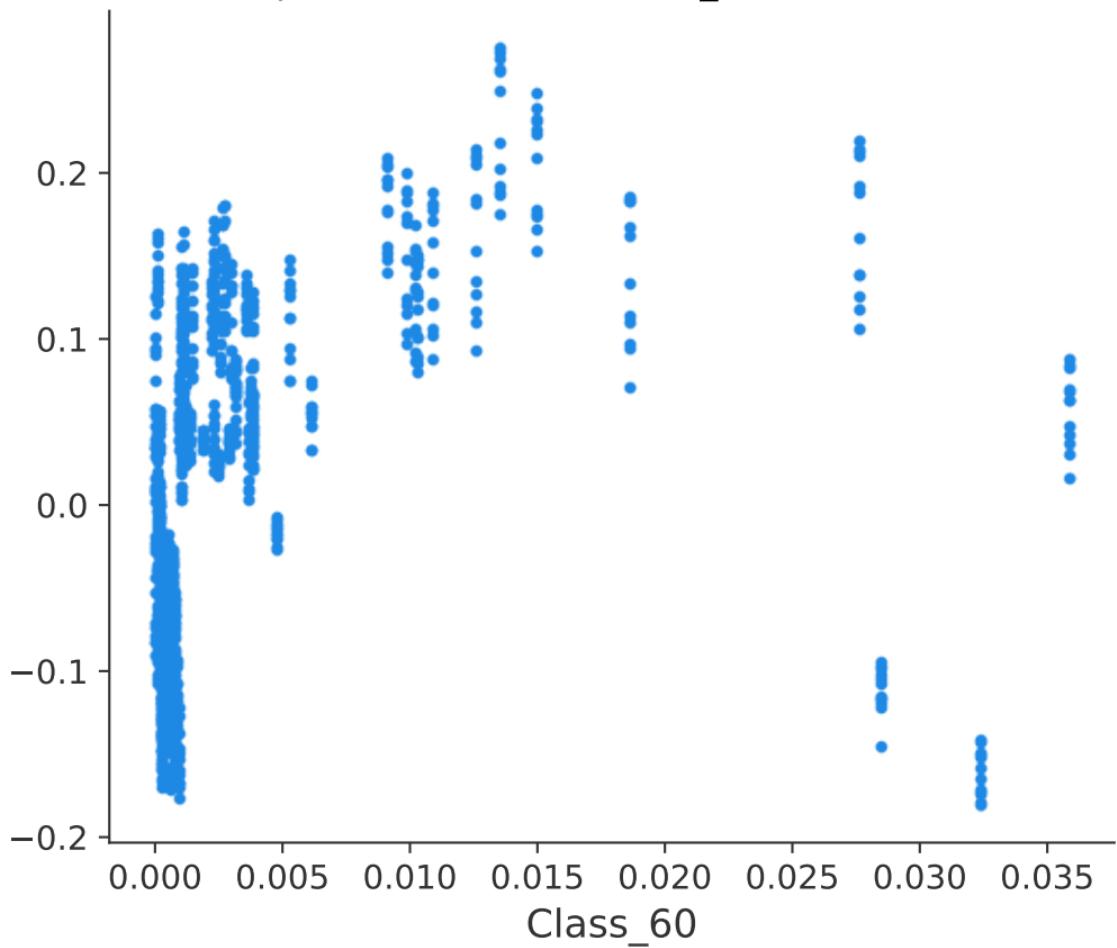
-0.15

0.000 0.005 0.010 0.015 0.020 0.025 0.030 0.035

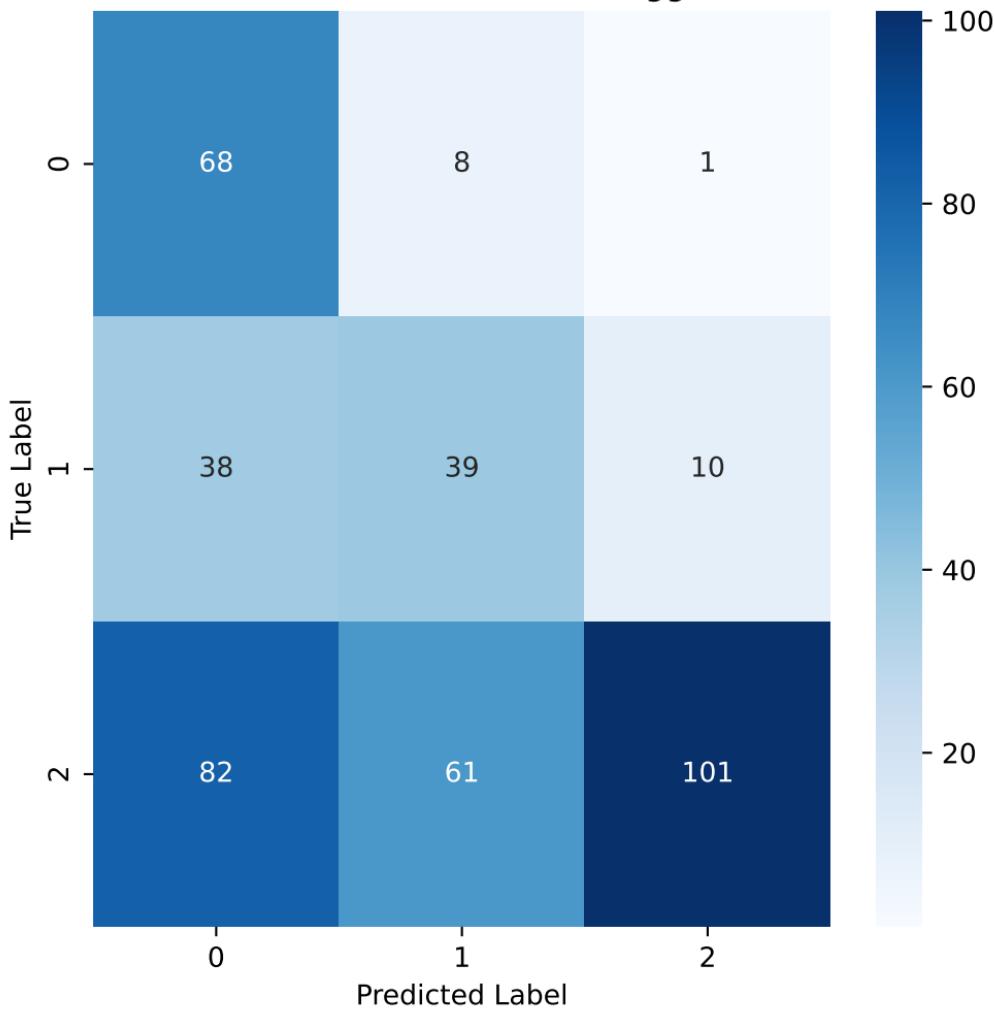
Class\_60

# SHAP Dependence Plot for Class\_60, Class 2 - Sumatra

SHAP value for  
Class\_60



# Confusion Matrix - Nusa Tenggara

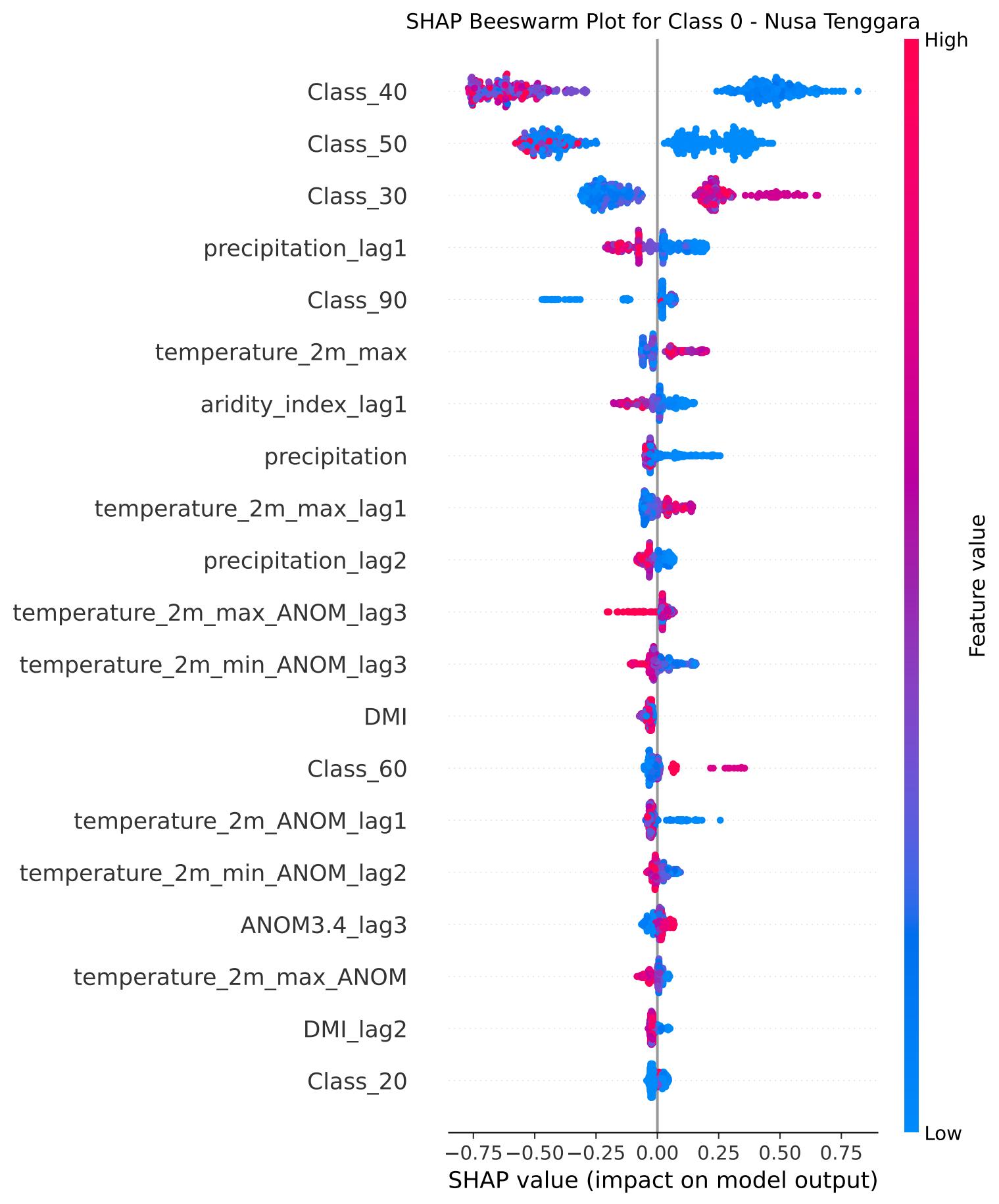


SHAP Beeswarm Plot for Class 0 - Nusa Tenggara

High

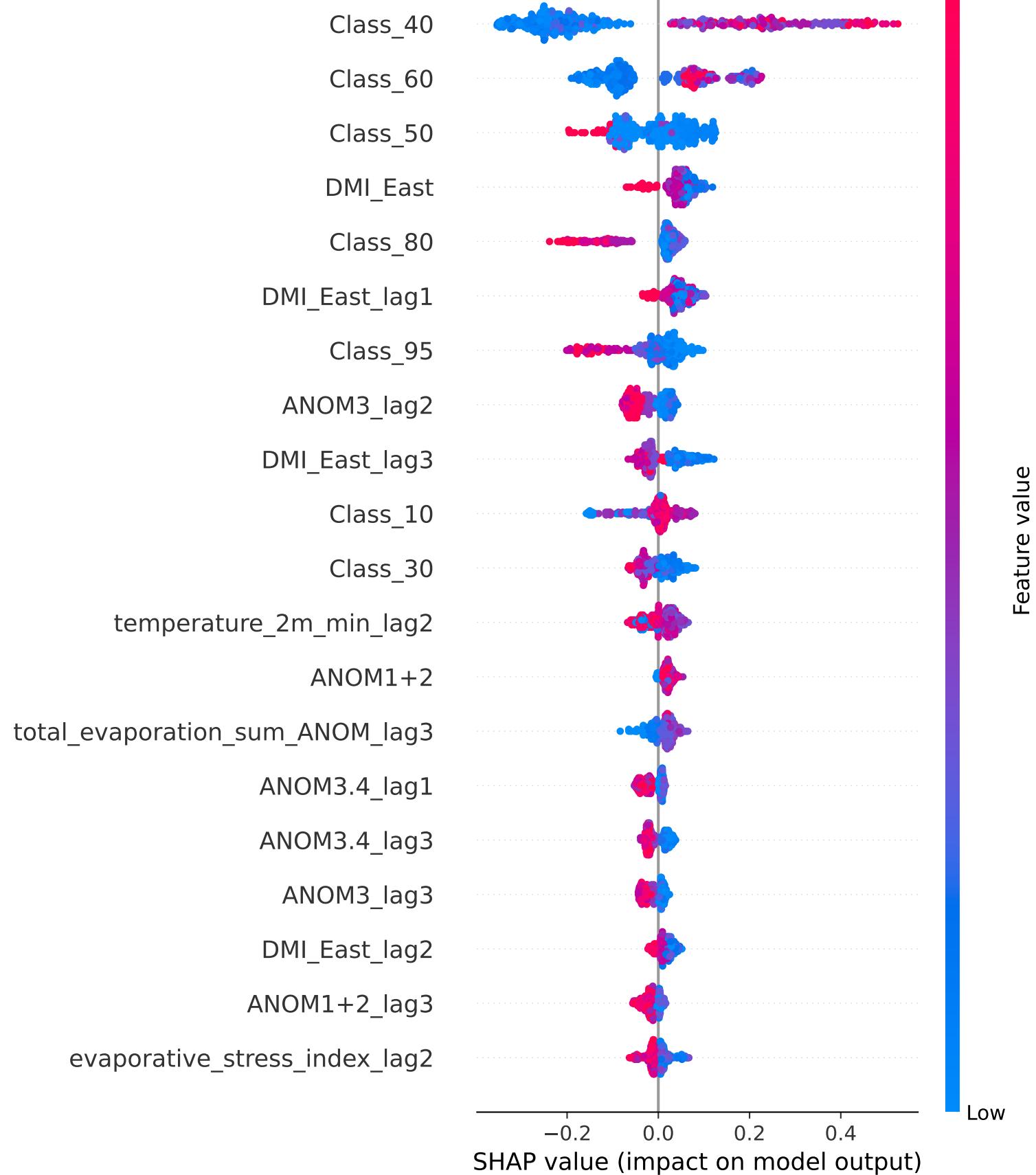
Feature value

Low



SHAP Beeswarm Plot for Class 1 - Nusa Tenggara

High



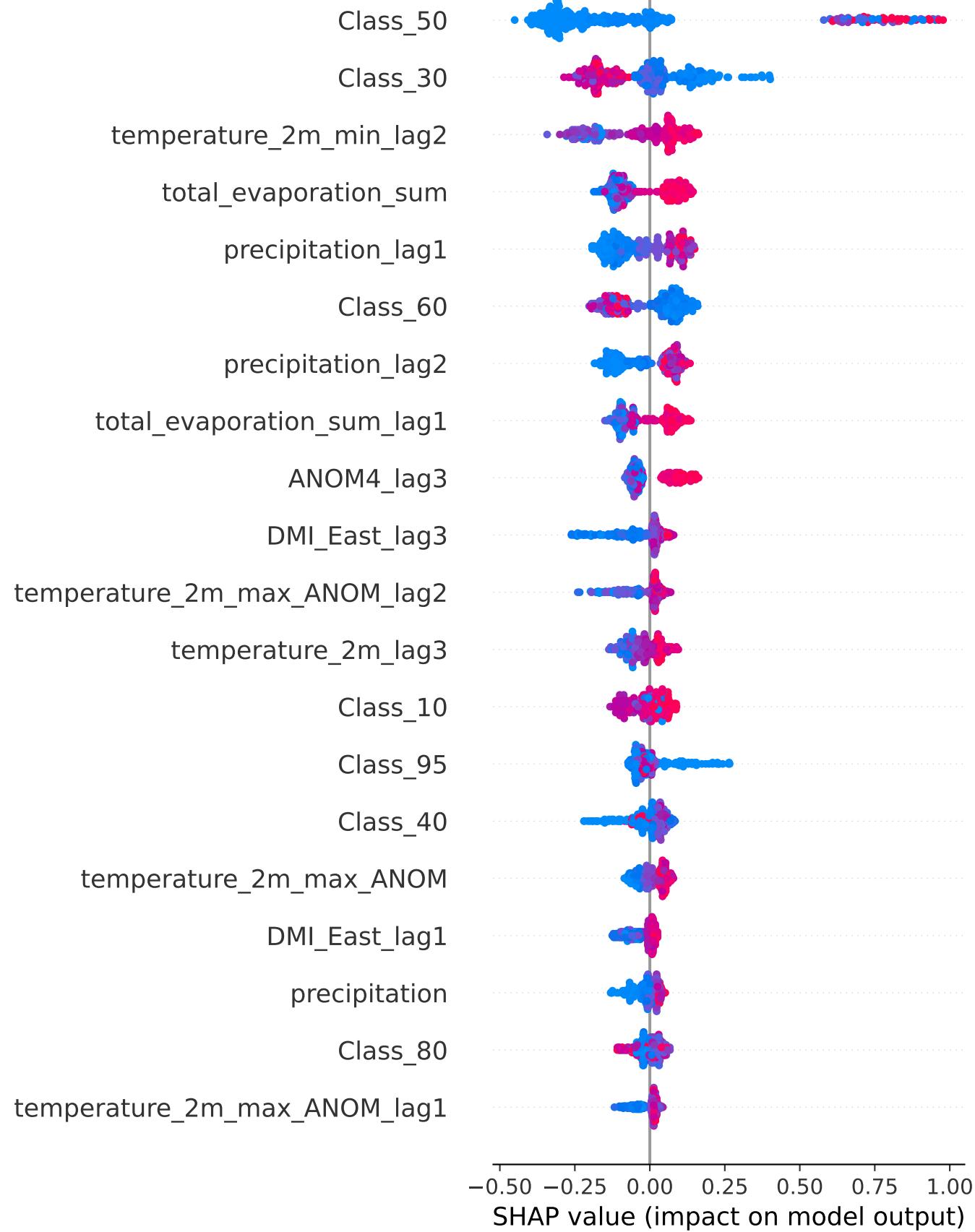
SHAP Beeswarm Plot for Class 2 - Nusa Tenggara

High

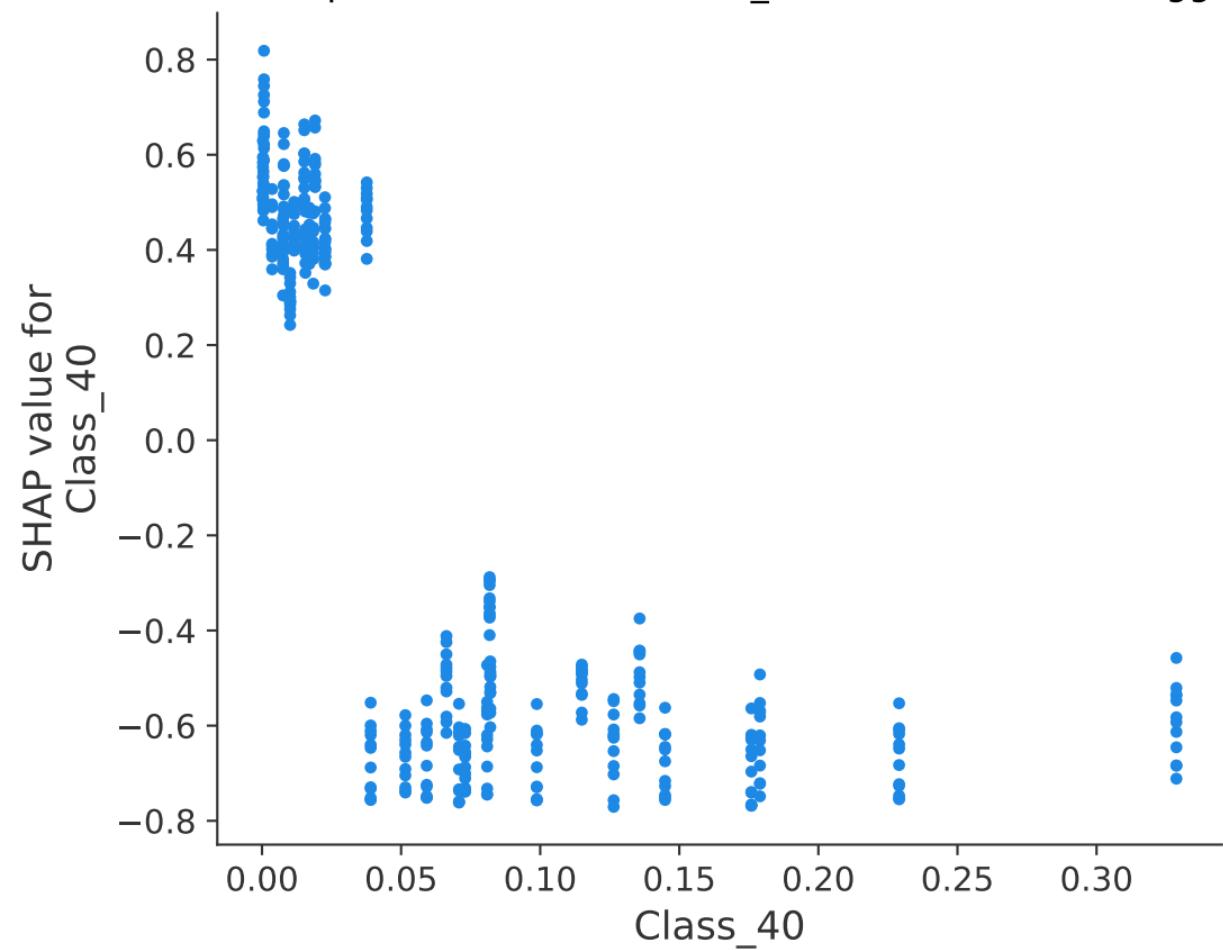
Feature value

Low

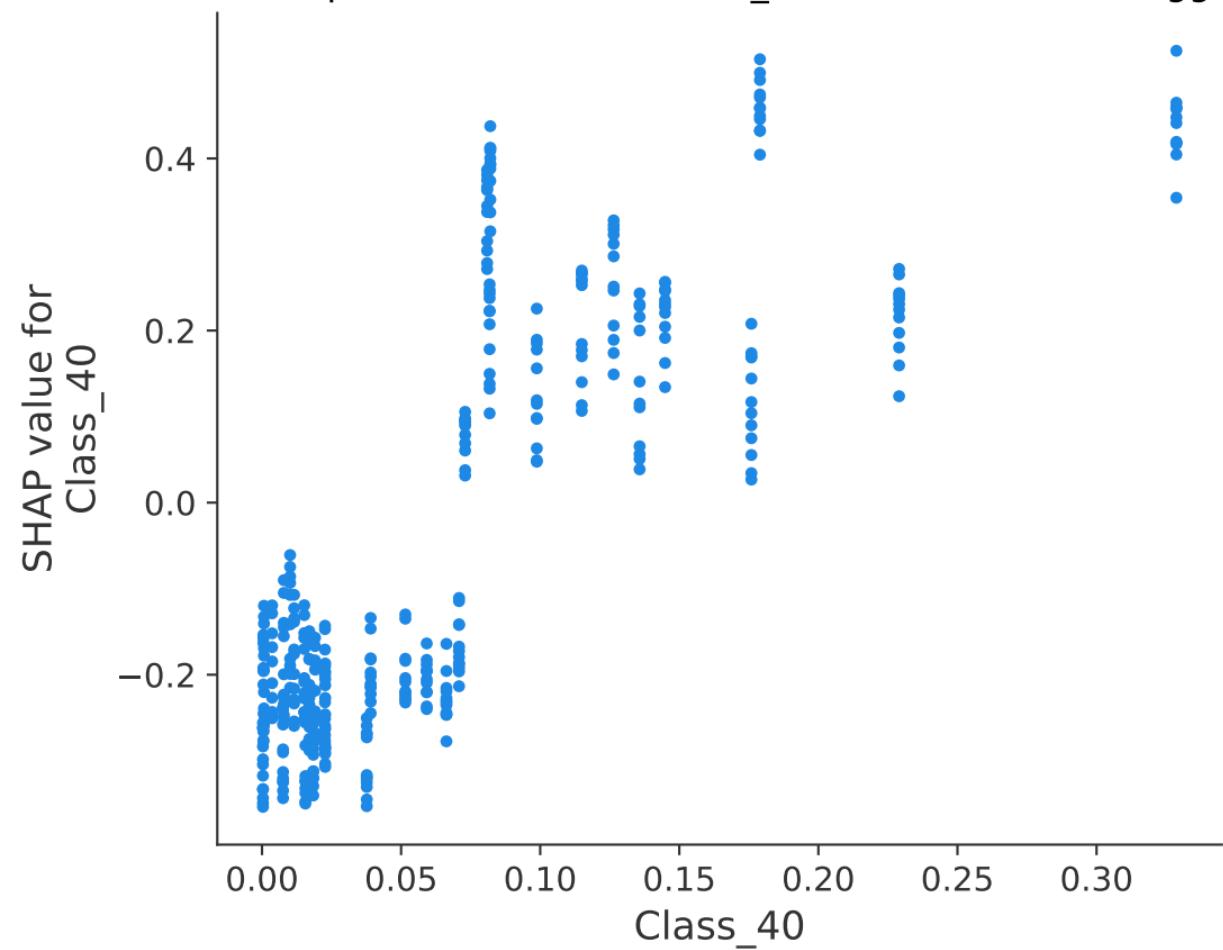
SHAP value (impact on model output)



# SHAP Dependence Plot for Class\_40, Class 0 - Nusa Tenggara

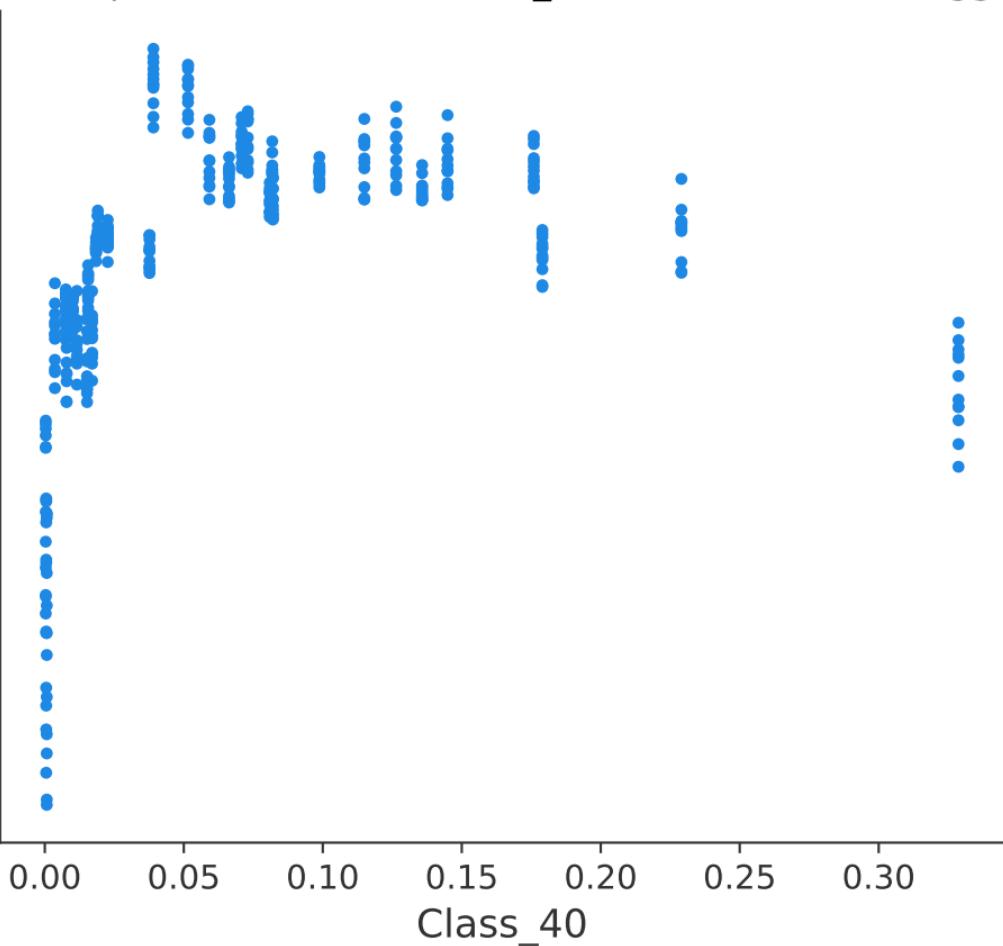


# SHAP Dependence Plot for Class\_40, Class 1 - Nusa Tenggara



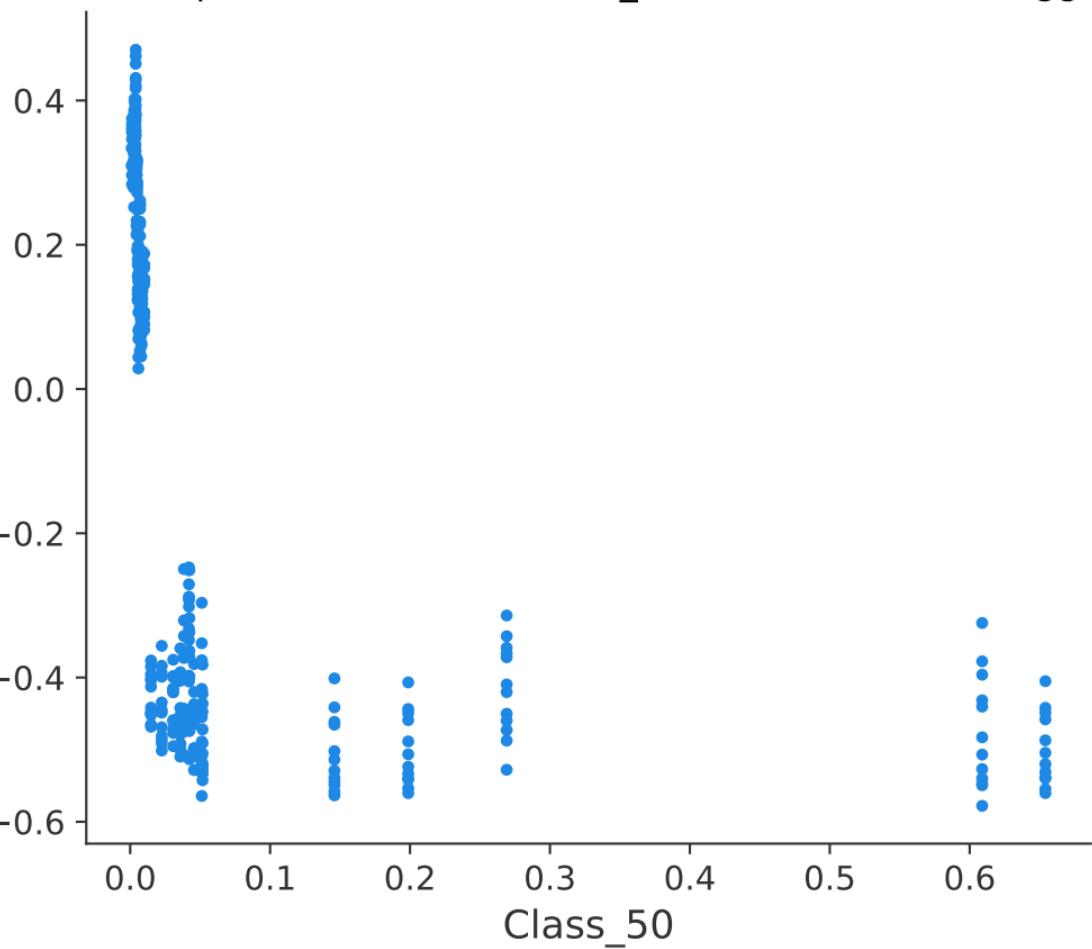
# SHAP Dependence Plot for Class\_40, Class 2 - Nusa Tenggara

SHAP value for  
Class\_40



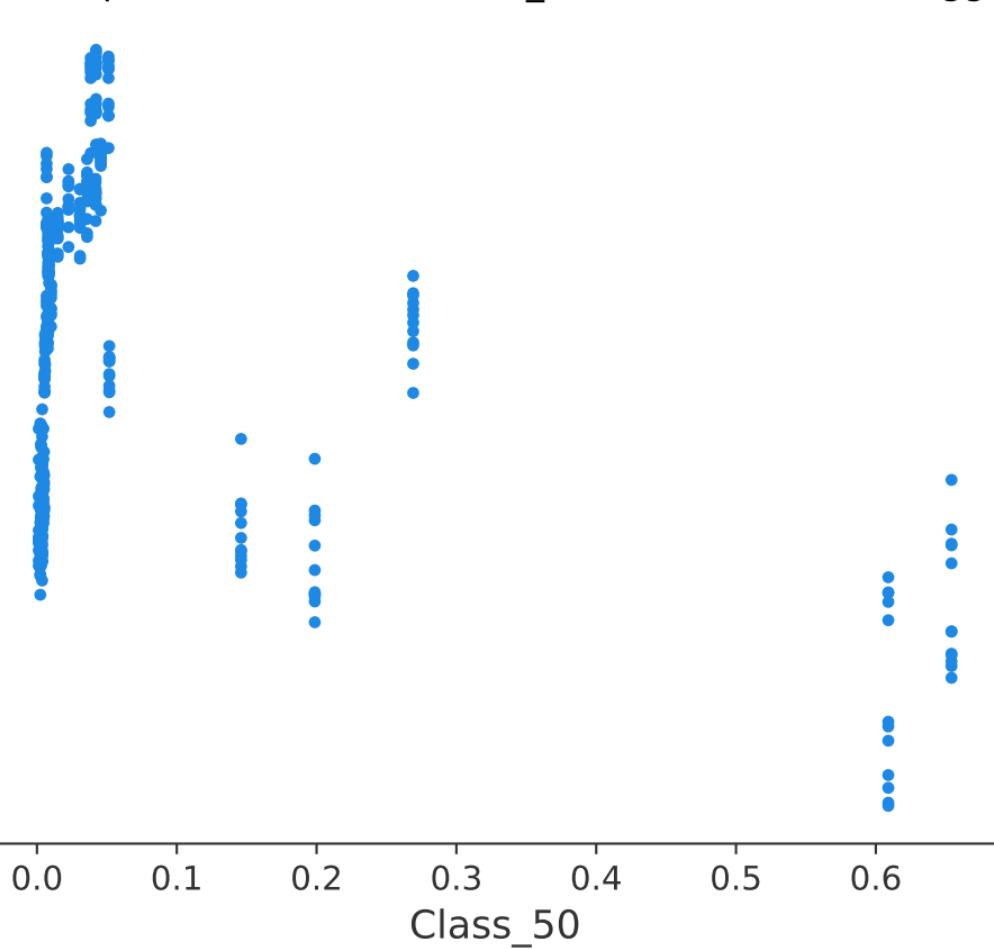
# SHAP Dependence Plot for Class\_50, Class 0 - Nusa Tenggara

SHAP value for  
Class\_50

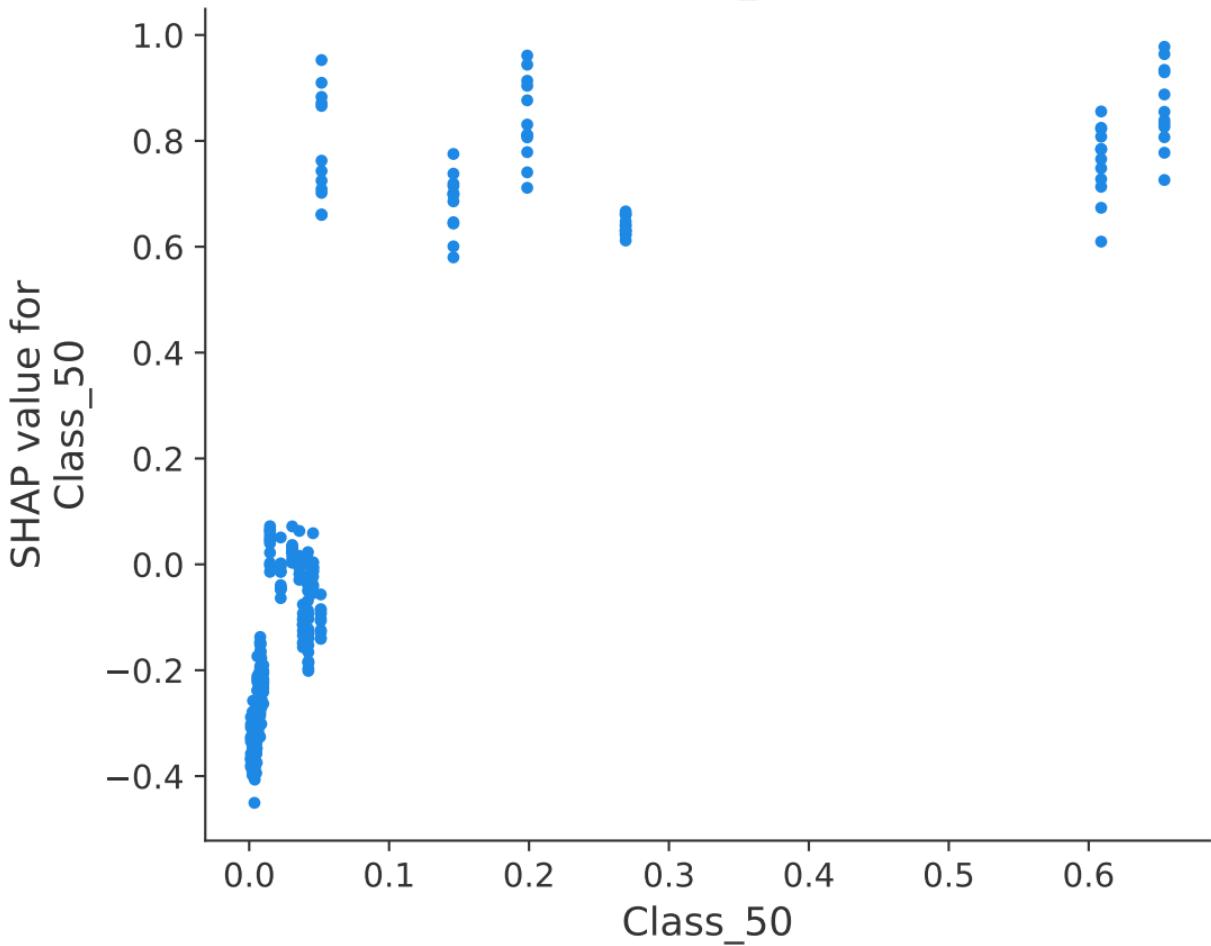


# SHAP Dependence Plot for Class\_50, Class 1 - Nusa Tenggara

SHAP value for  
Class\_50

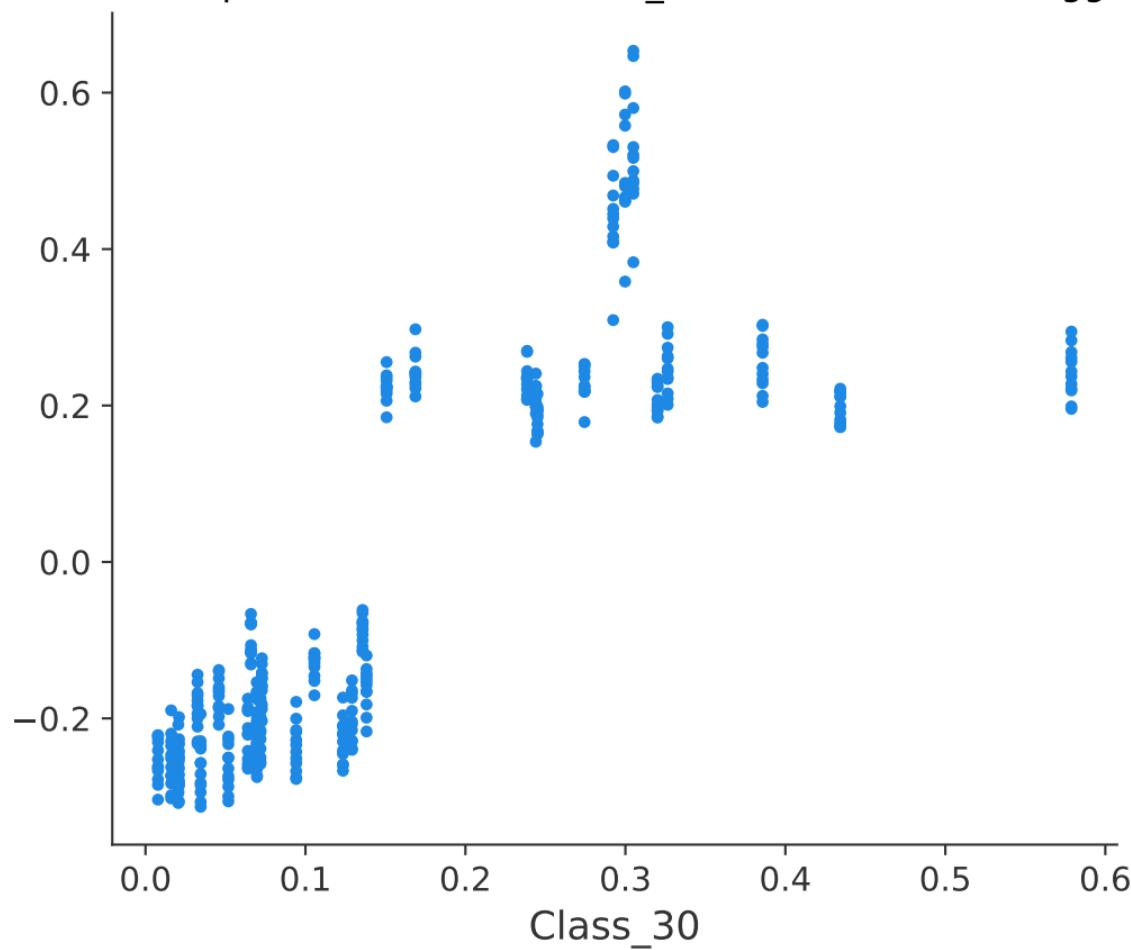


# SHAP Dependence Plot for Class\_50, Class 2 - Nusa Tenggara



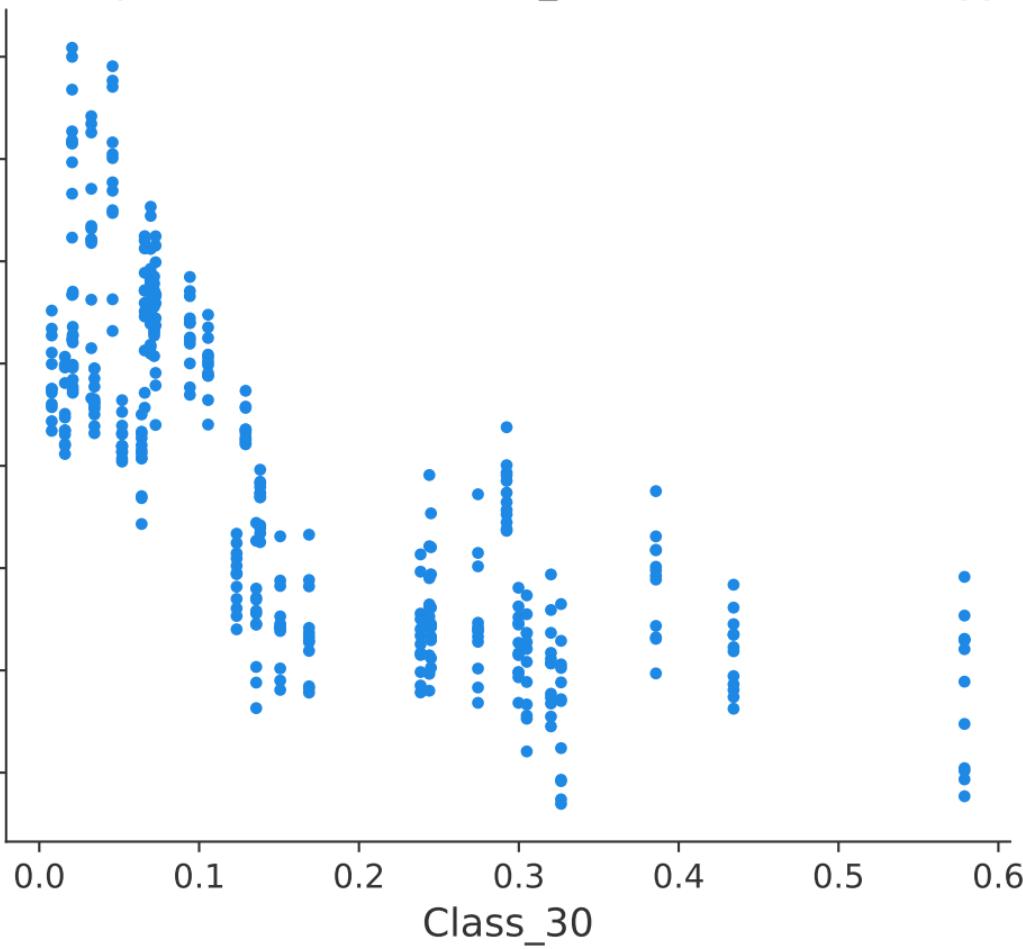
# SHAP Dependence Plot for Class\_30, Class 0 - Nusa Tenggara

SHAP value for  
Class\_30

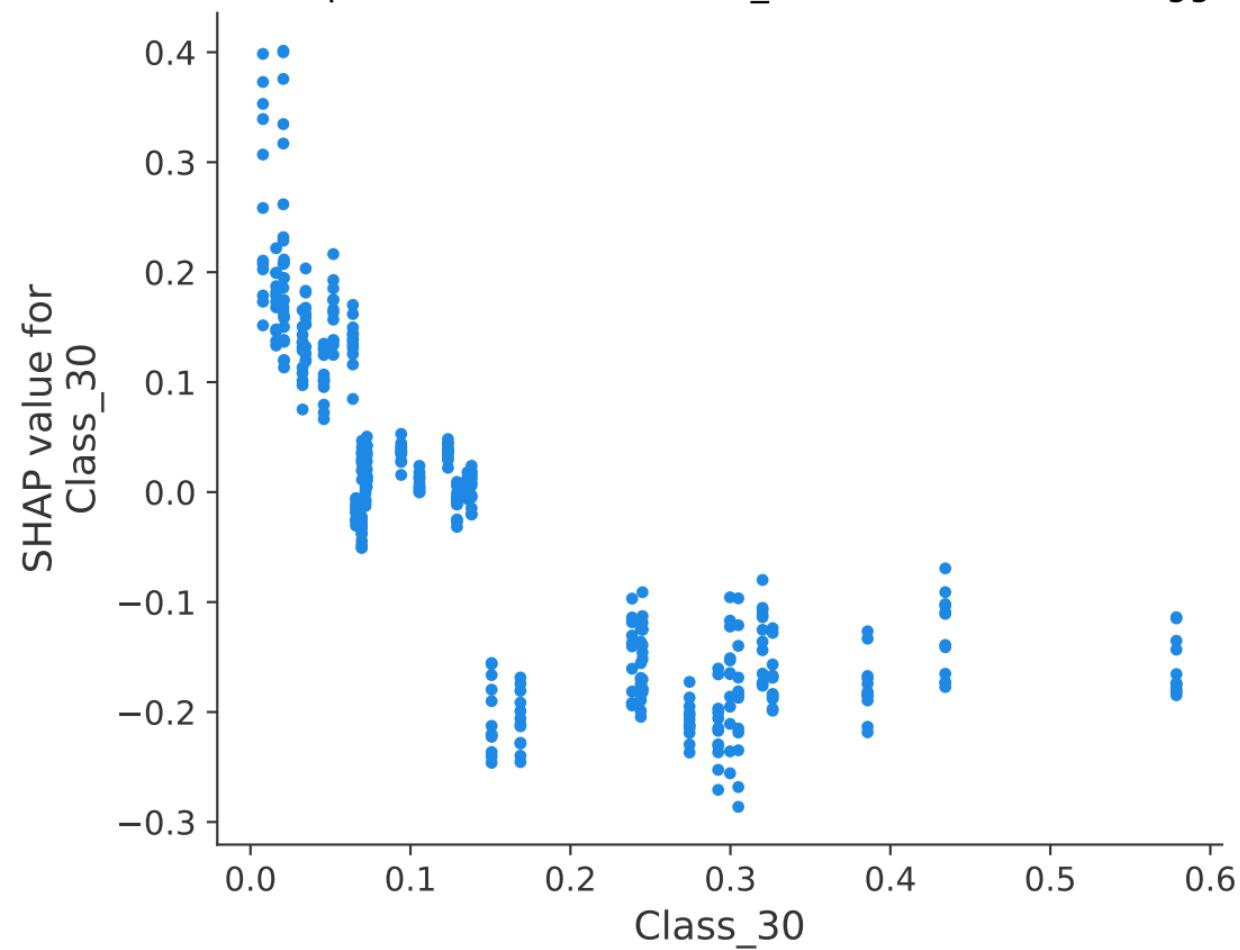


# SHAP Dependence Plot for Class\_30, Class 1 - Nusa Tenggara

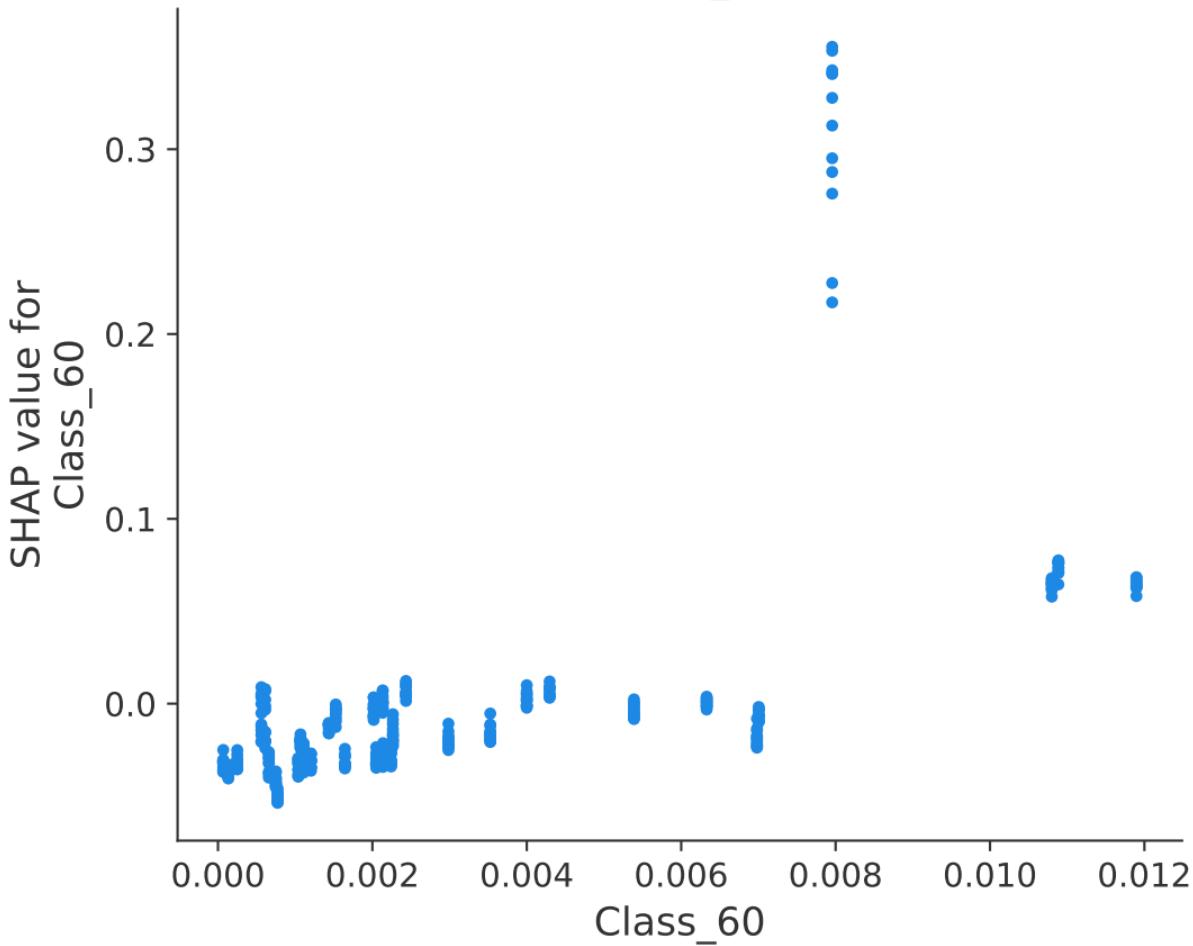
SHAP value for  
Class\_30



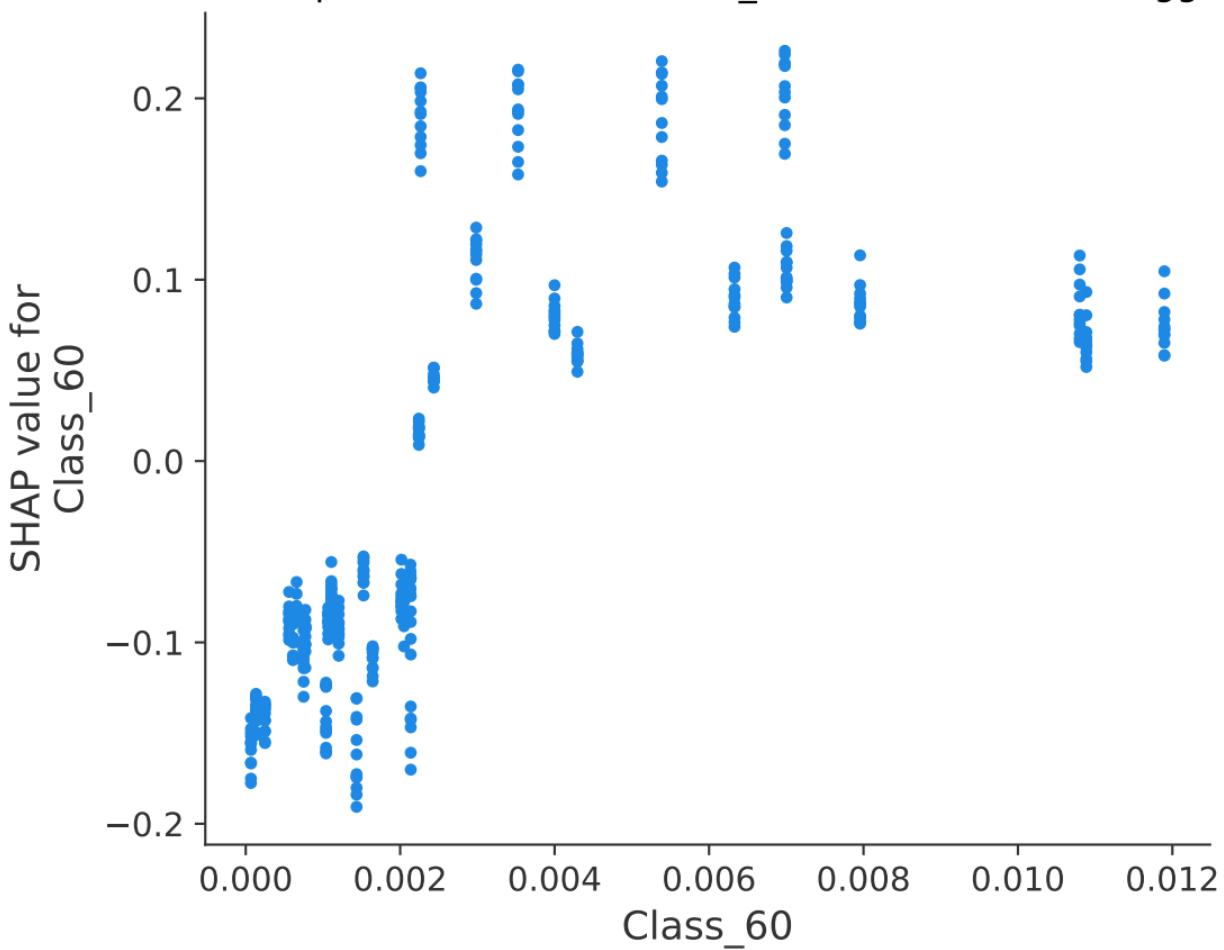
# SHAP Dependence Plot for Class\_30, Class 2 - Nusa Tenggara



# SHAP Dependence Plot for Class\_60, Class 0 - Nusa Tenggara

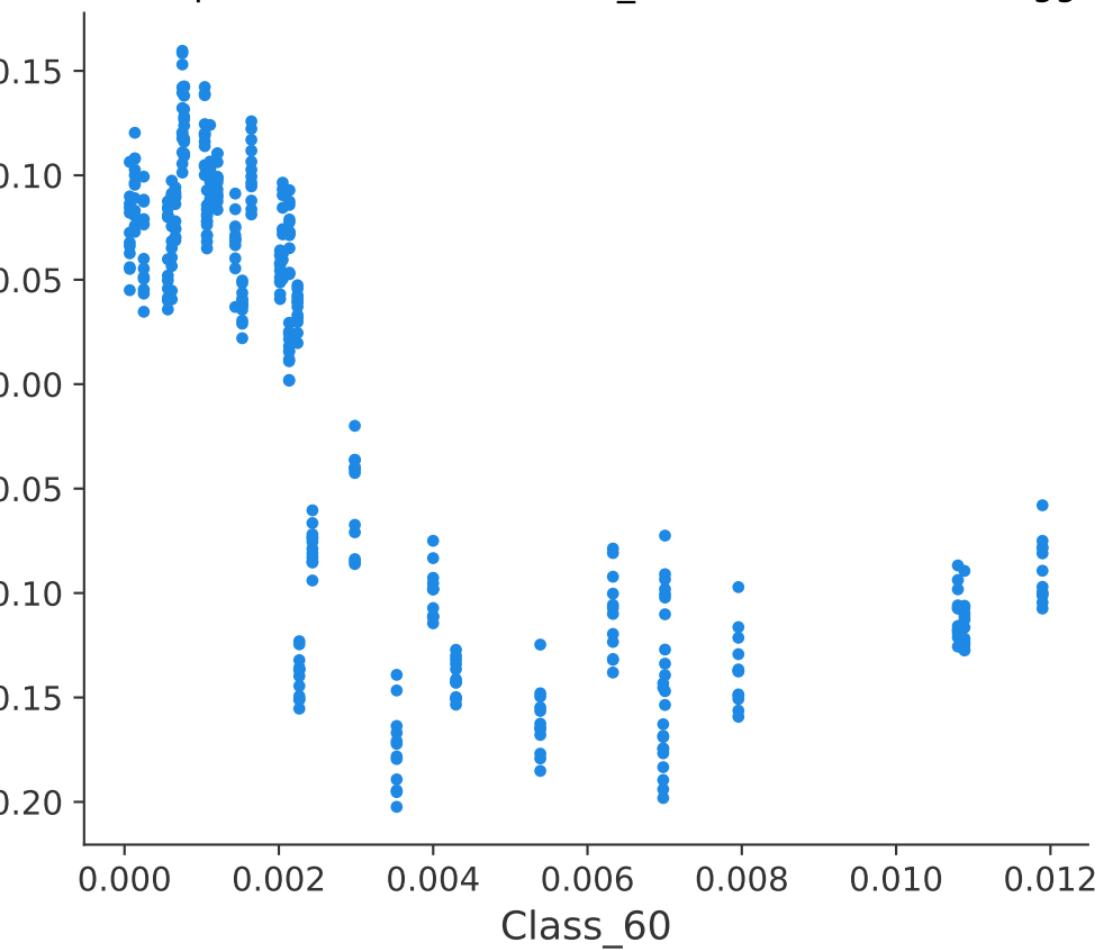


# SHAP Dependence Plot for Class\_60, Class 1 - Nusa Tenggara

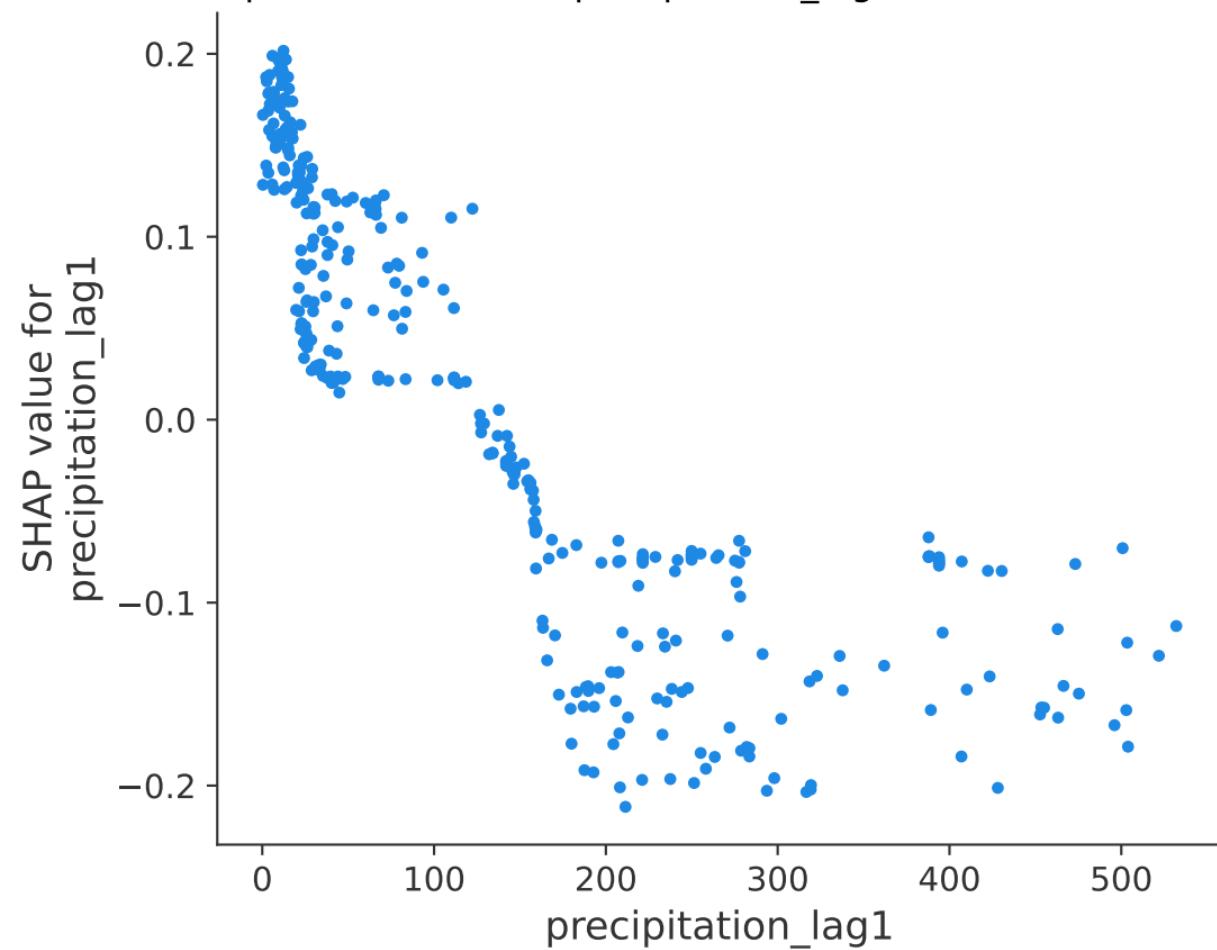


# SHAP Dependence Plot for Class\_60, Class 2 - Nusa Tenggara

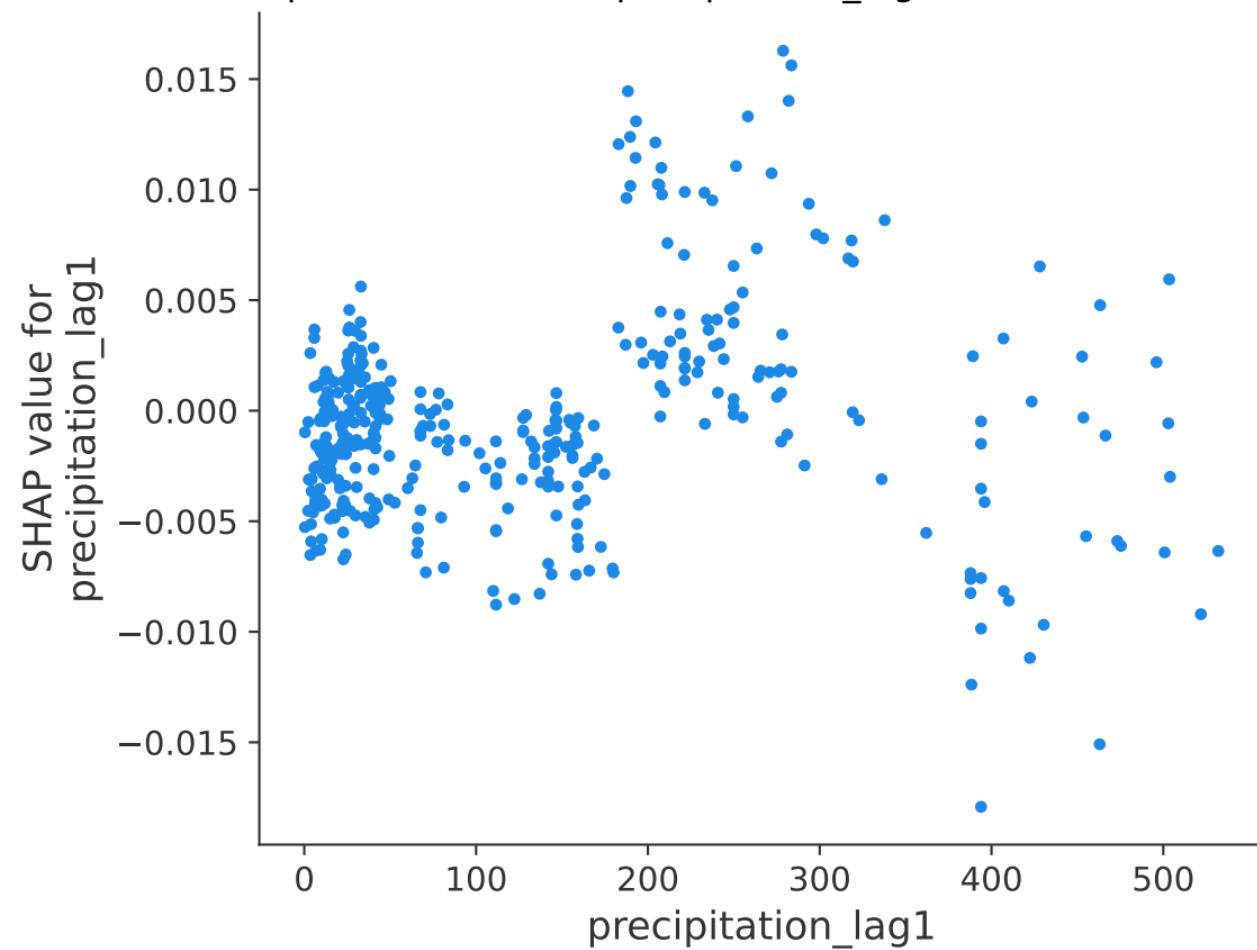
SHAP value for  
Class\_60



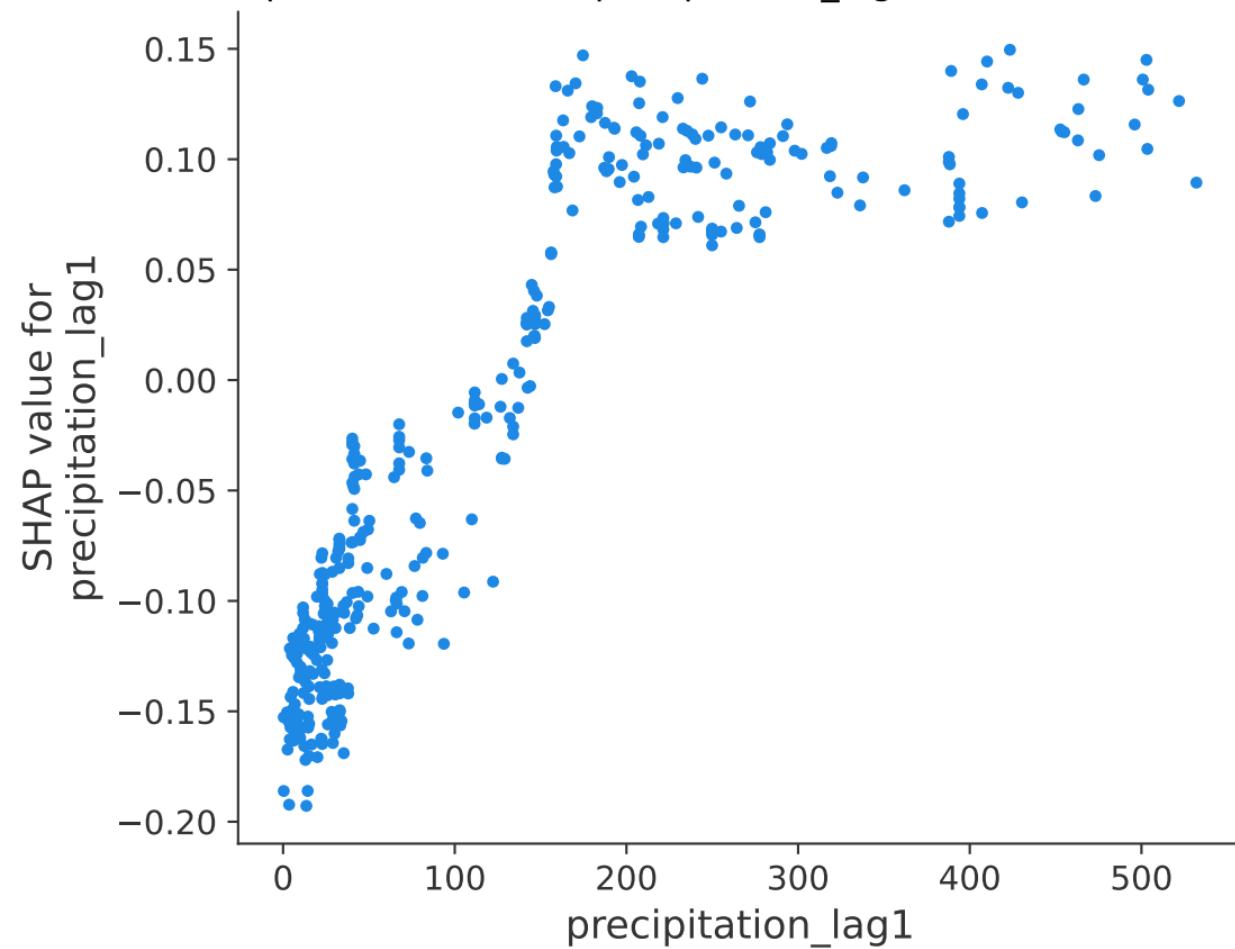
# SHAP Dependence Plot for precipitation\_lag1, Class 0 - Nusa Tenggara



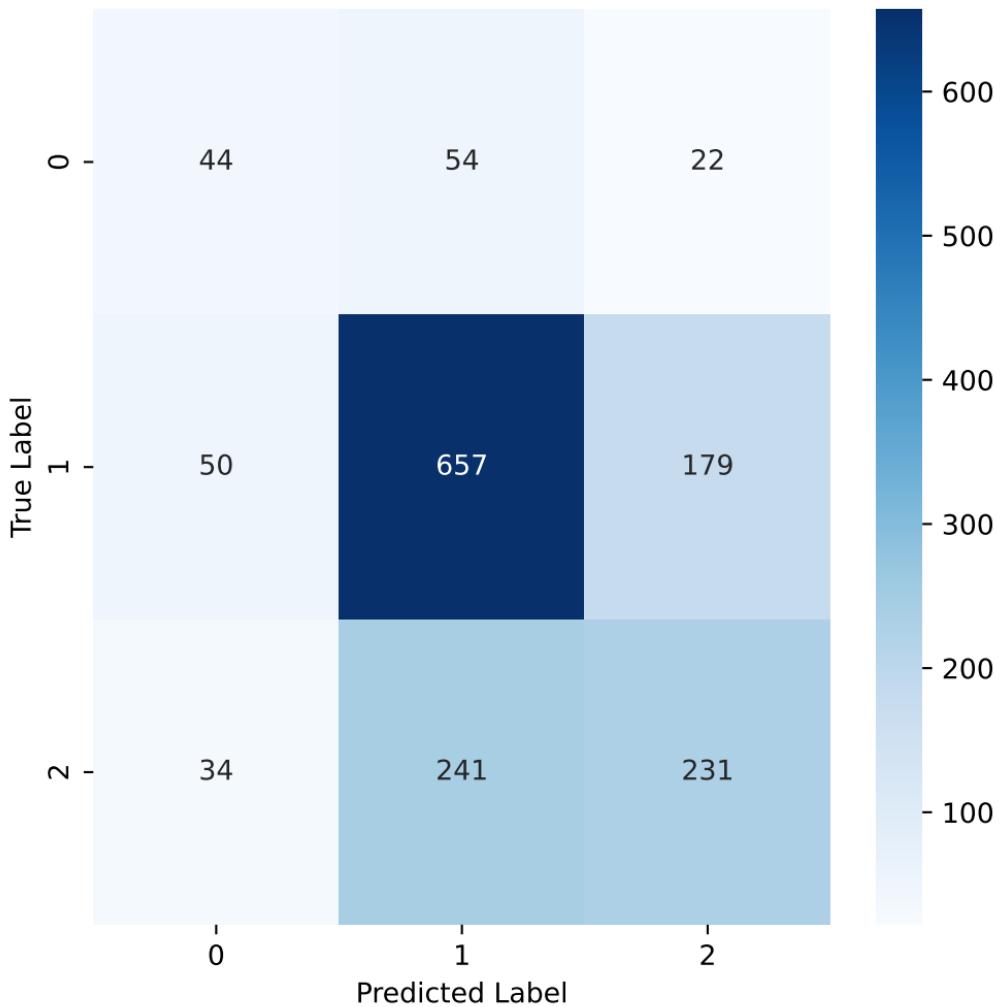
# SHAP Dependence Plot for precipitation\_lag1, Class 1 - Nusa Tenggara



# SHAP Dependence Plot for precipitation\_lag1, Class 2 - Nusa Tenggara



# Confusion Matrix - Java

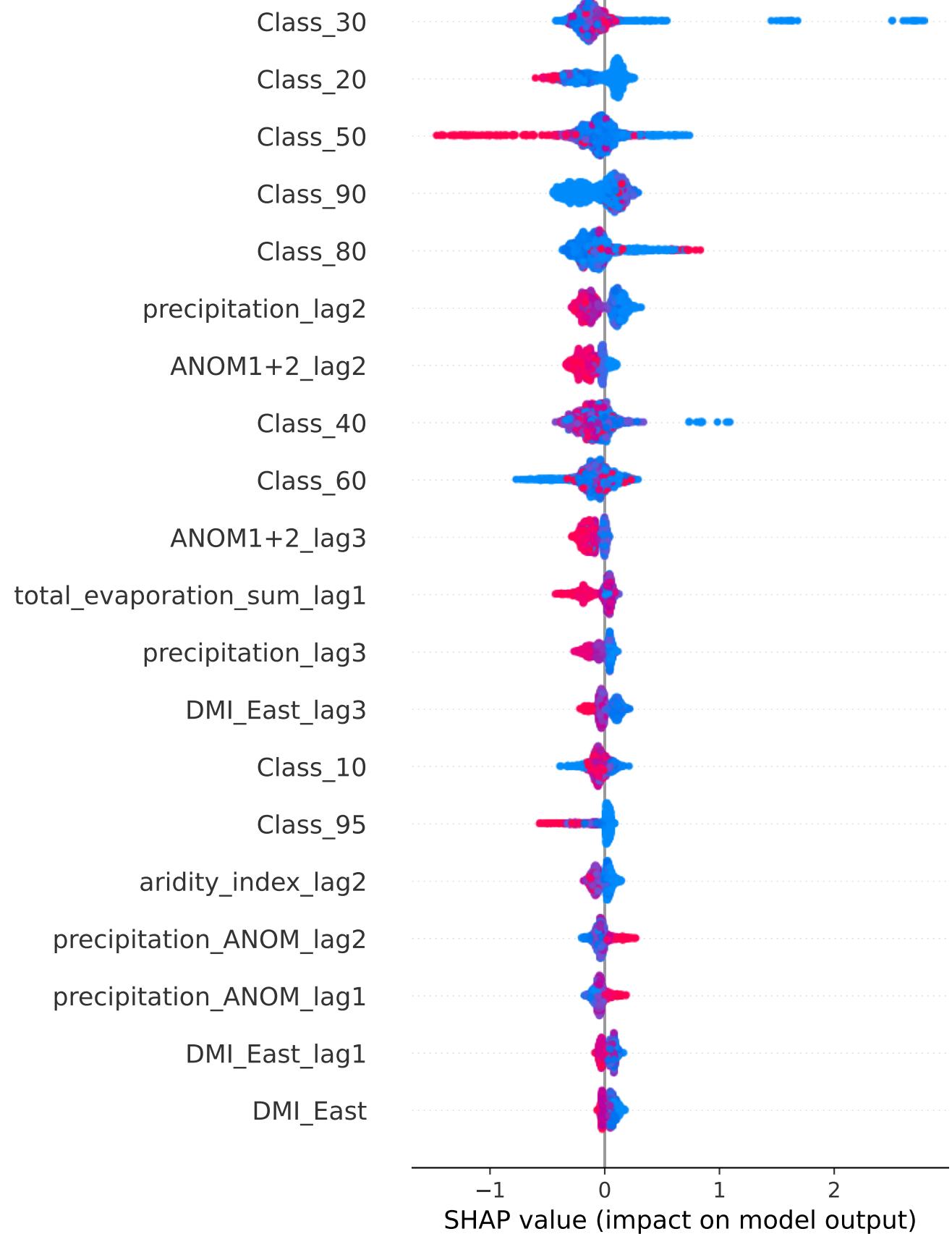


# SHAP Beeswarm Plot for Class 0 - Java

High

Feature value

Low

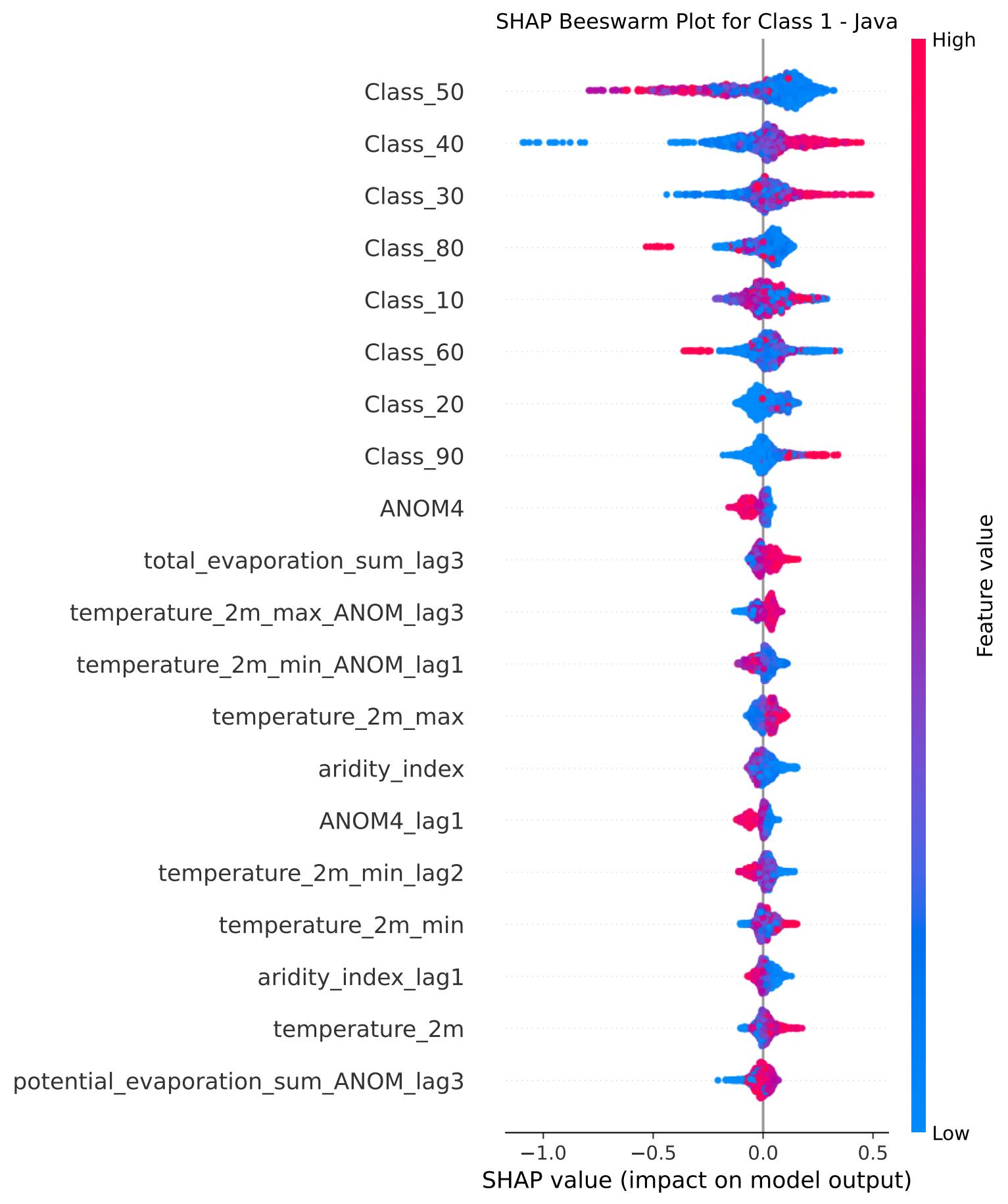


SHAP Beeswarm Plot for Class 1 - Java

High

Feature value

Low



# SHAP Beeswarm Plot for Class 2 - Java

High

Class\_50

Class\_90

precipitation\_lag2

Class\_20

Class\_40

precipitation\_lag1

Class\_80

Class\_60

Class\_30

DMI\_East\_lag3

DMI\_East\_lag1

ANOM3.4\_lag3

ANOM1+2\_lag3

ANOM1+2\_lag2

DMI\_East

precipitation

Class\_10

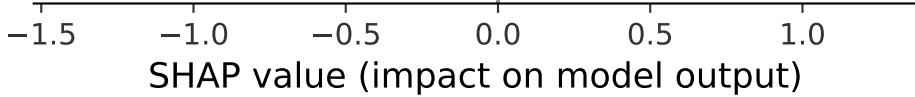
ANOM4\_lag3

ANOM4

Class\_95

Feature value

Low



# SHAP Dependence Plot for Class\_50, Class 0 - Java

SHAP value for  
Class\_50

0.5

0.0

-0.5

-1.0

-1.5

0.0

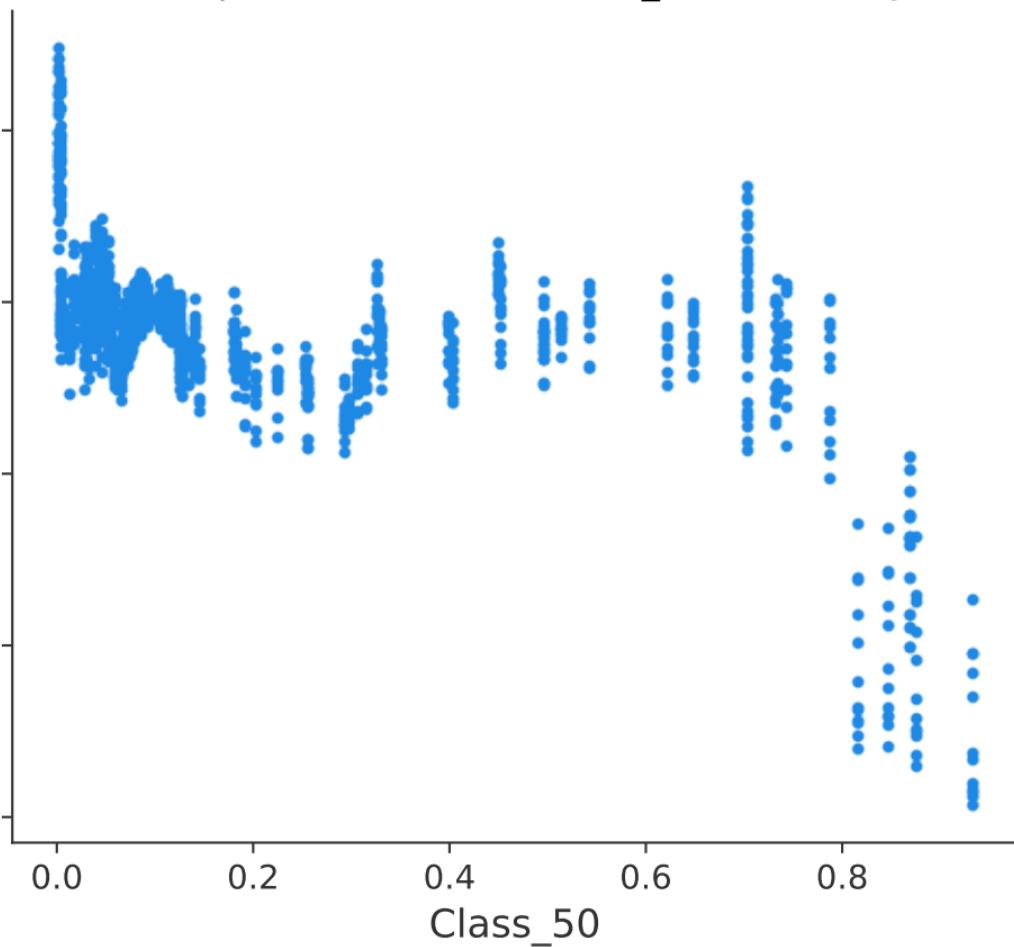
0.2

0.4

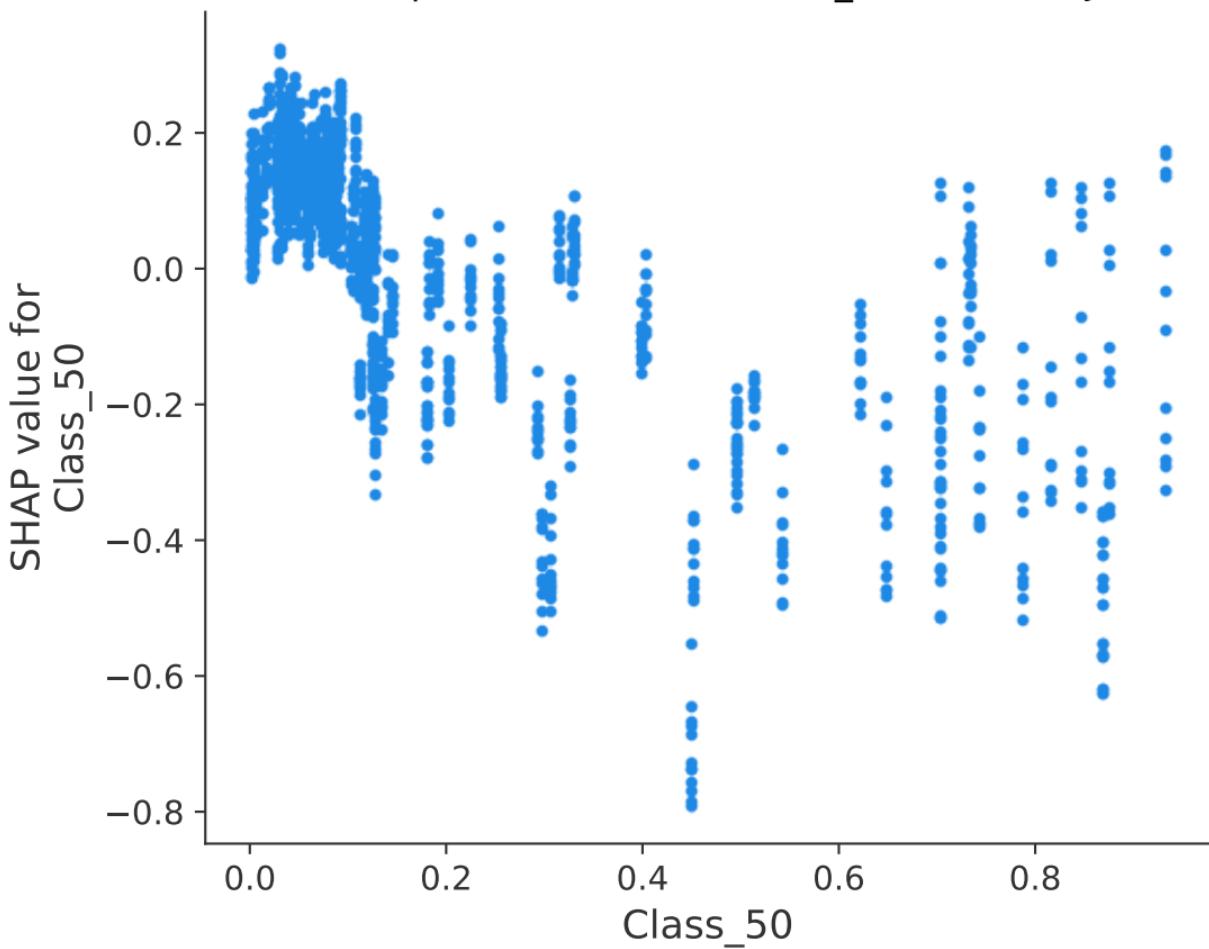
0.6

0.8

Class\_50

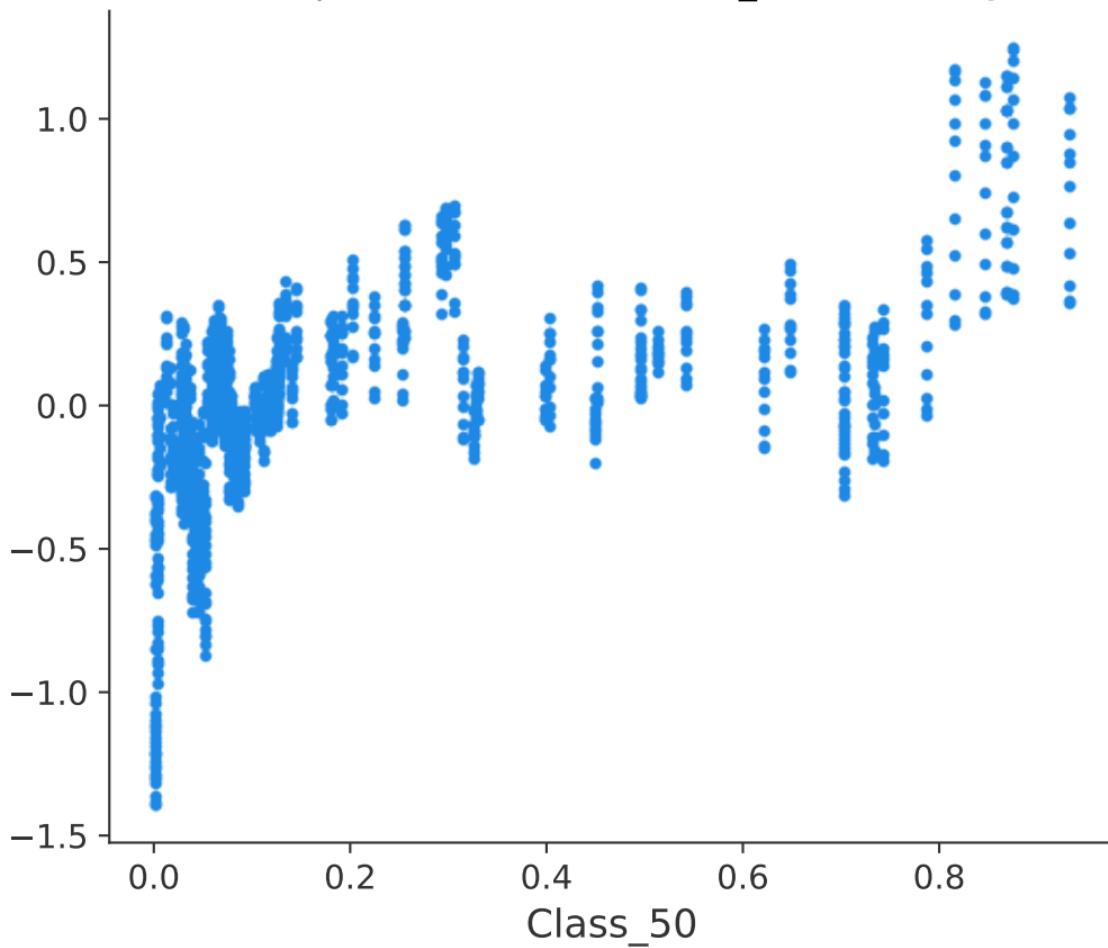


# SHAP Dependence Plot for Class\_50, Class 1 - Java

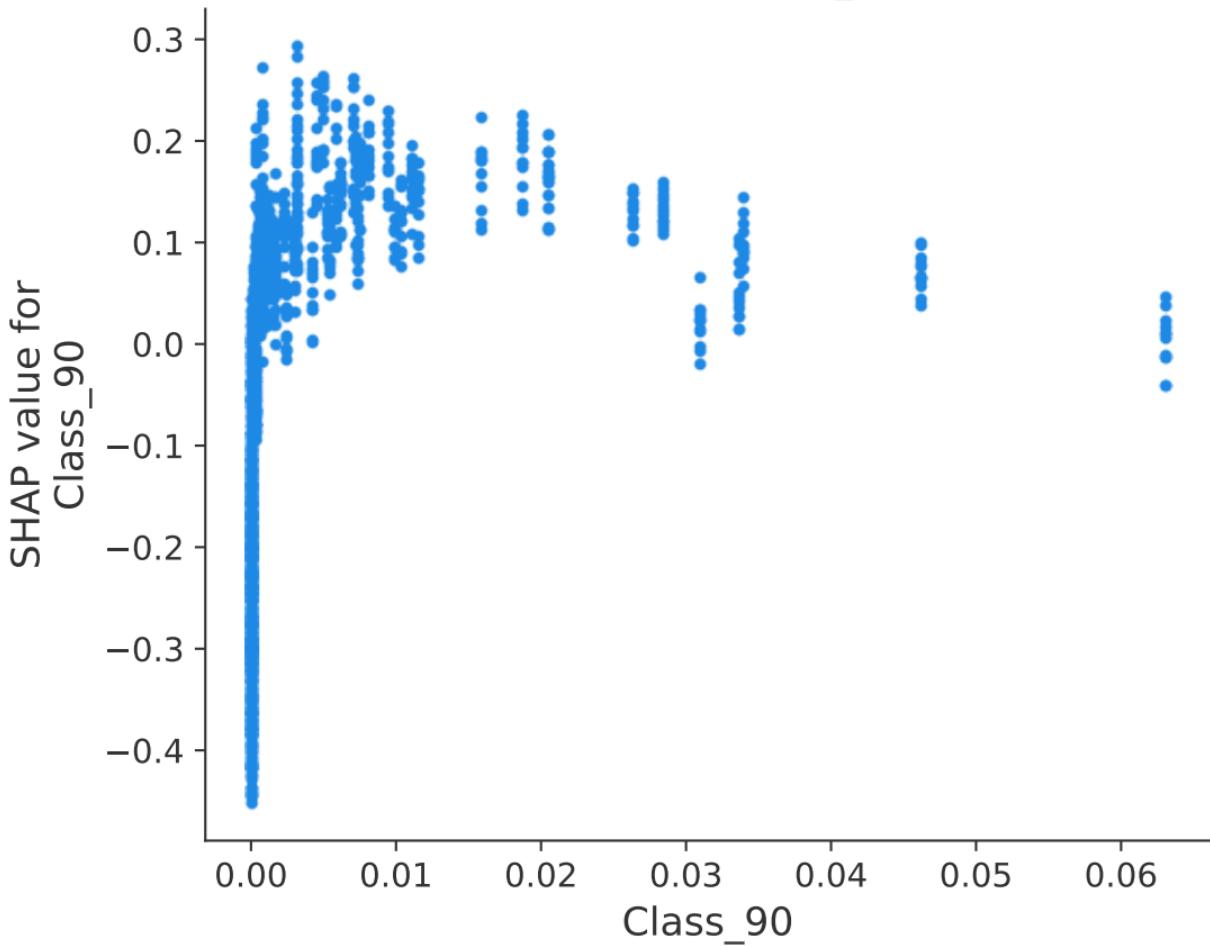


# SHAP Dependence Plot for Class\_50, Class 2 - Java

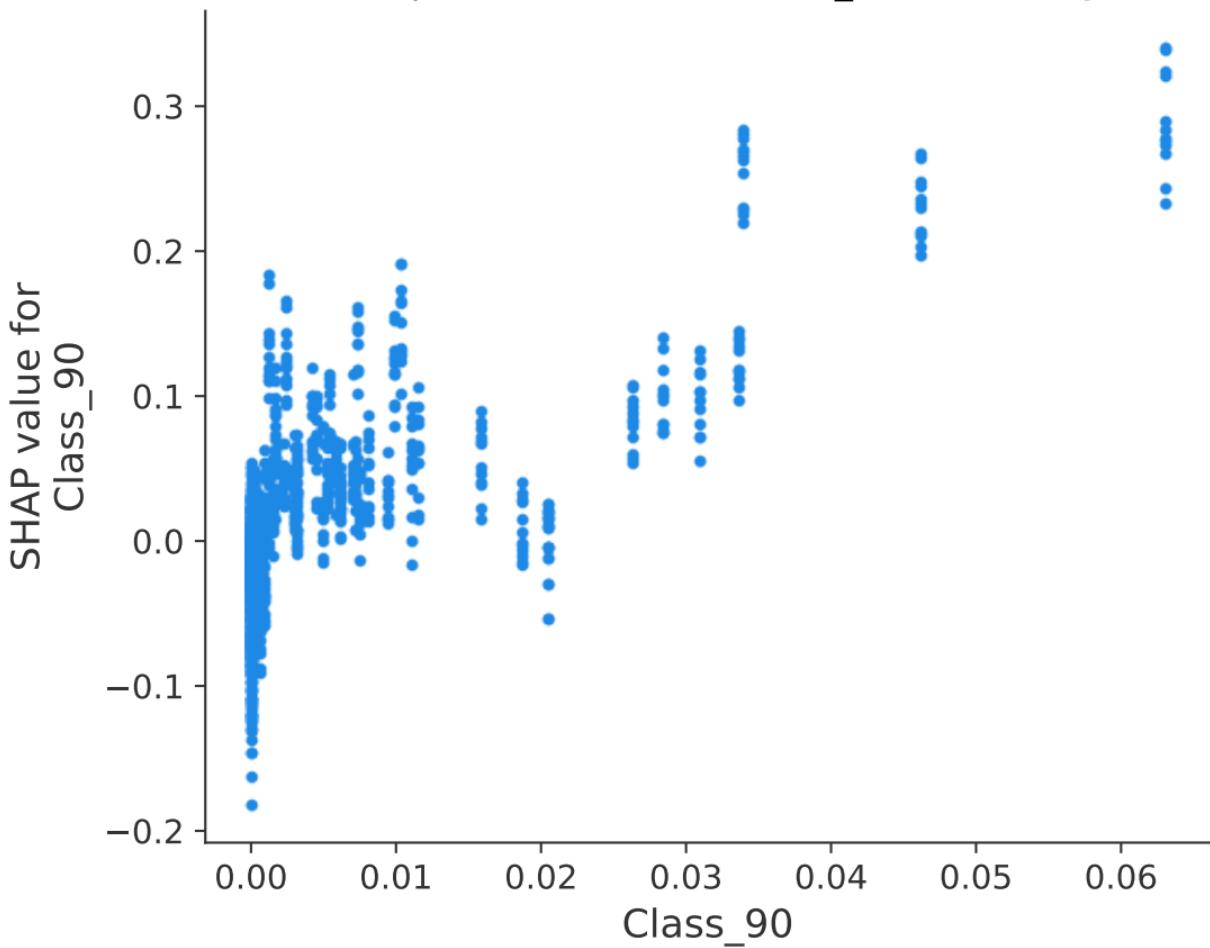
SHAP value for  
Class\_50



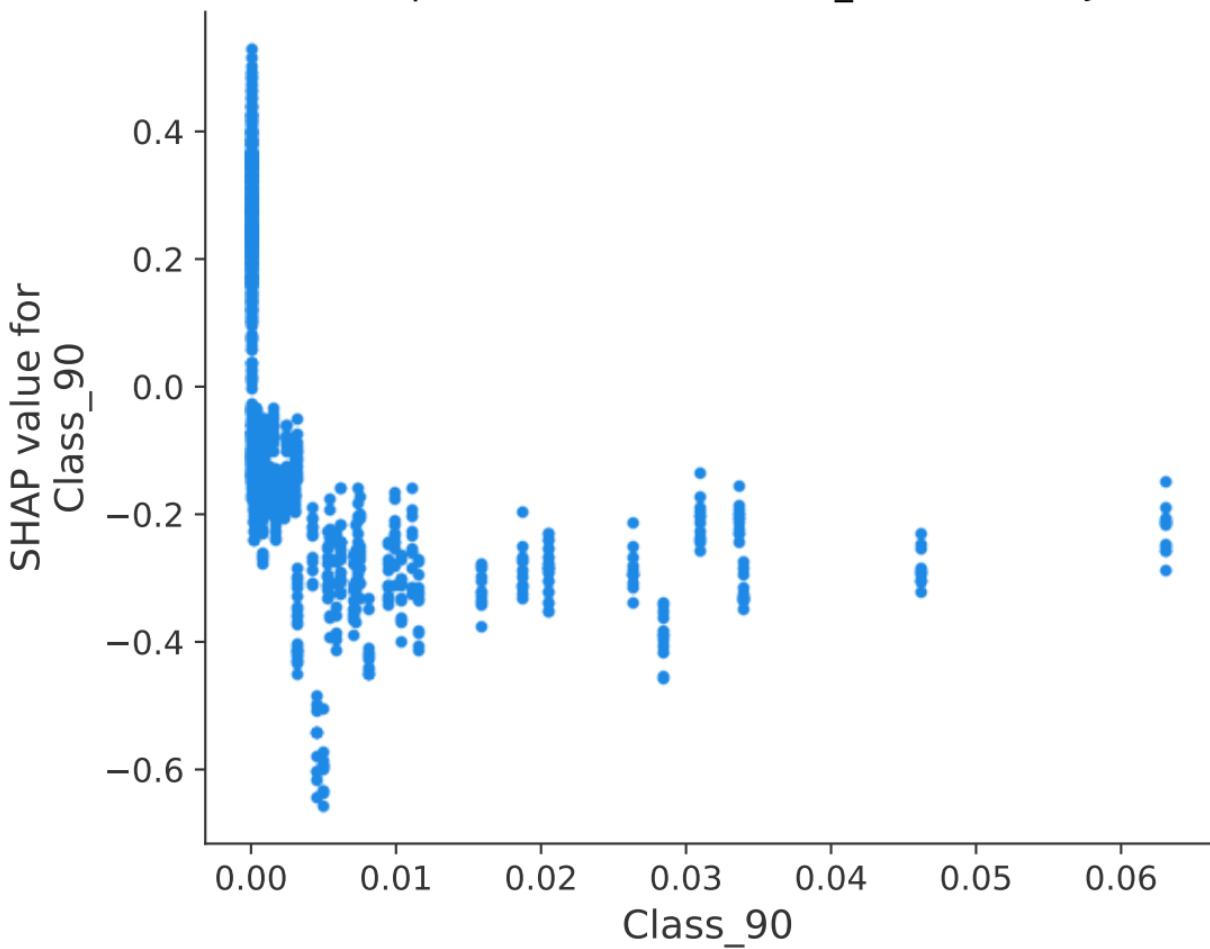
# SHAP Dependence Plot for Class\_90, Class 0 - Java



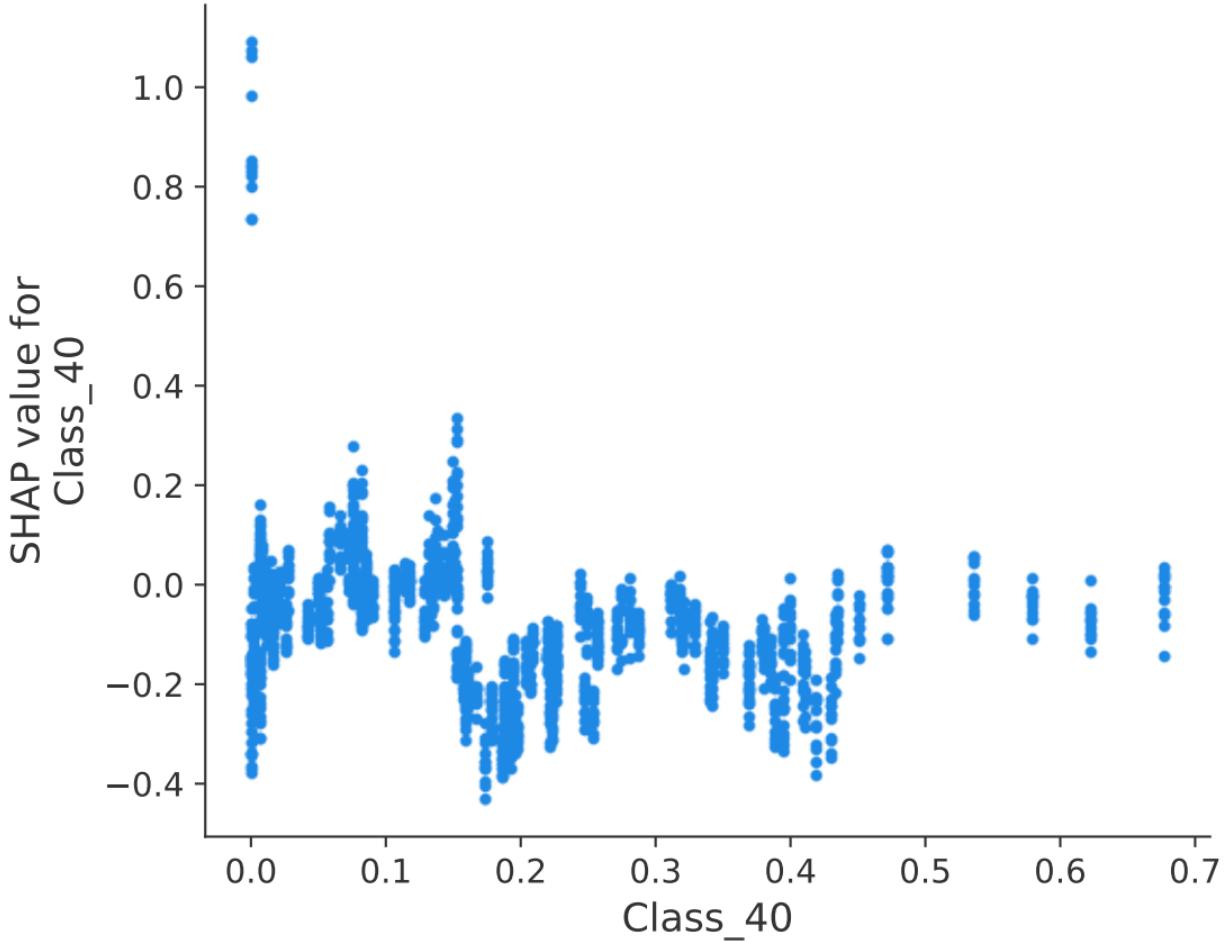
# SHAP Dependence Plot for Class\_90, Class 1 - Java



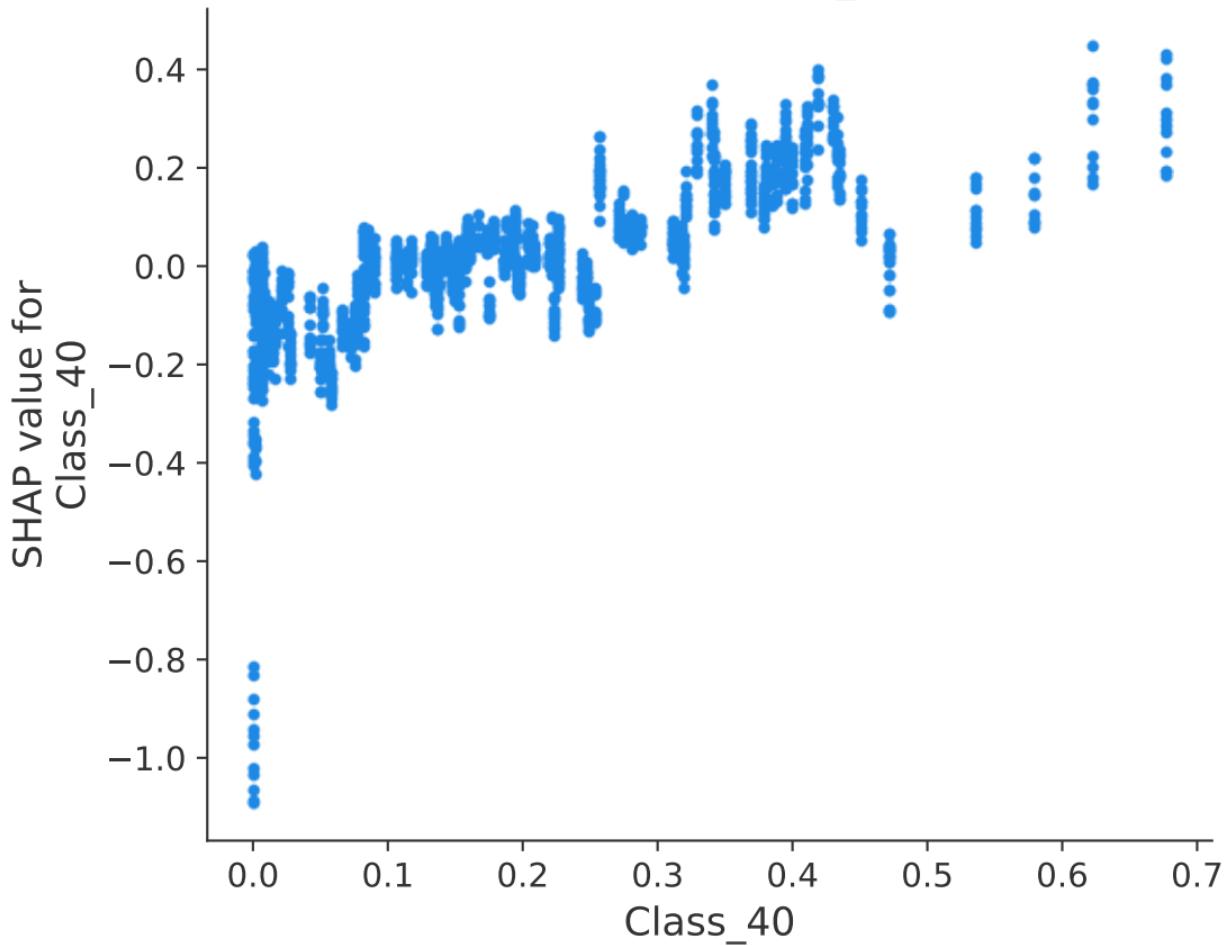
# SHAP Dependence Plot for Class\_90, Class 2 - Java



# SHAP Dependence Plot for Class\_40, Class 0 - Java

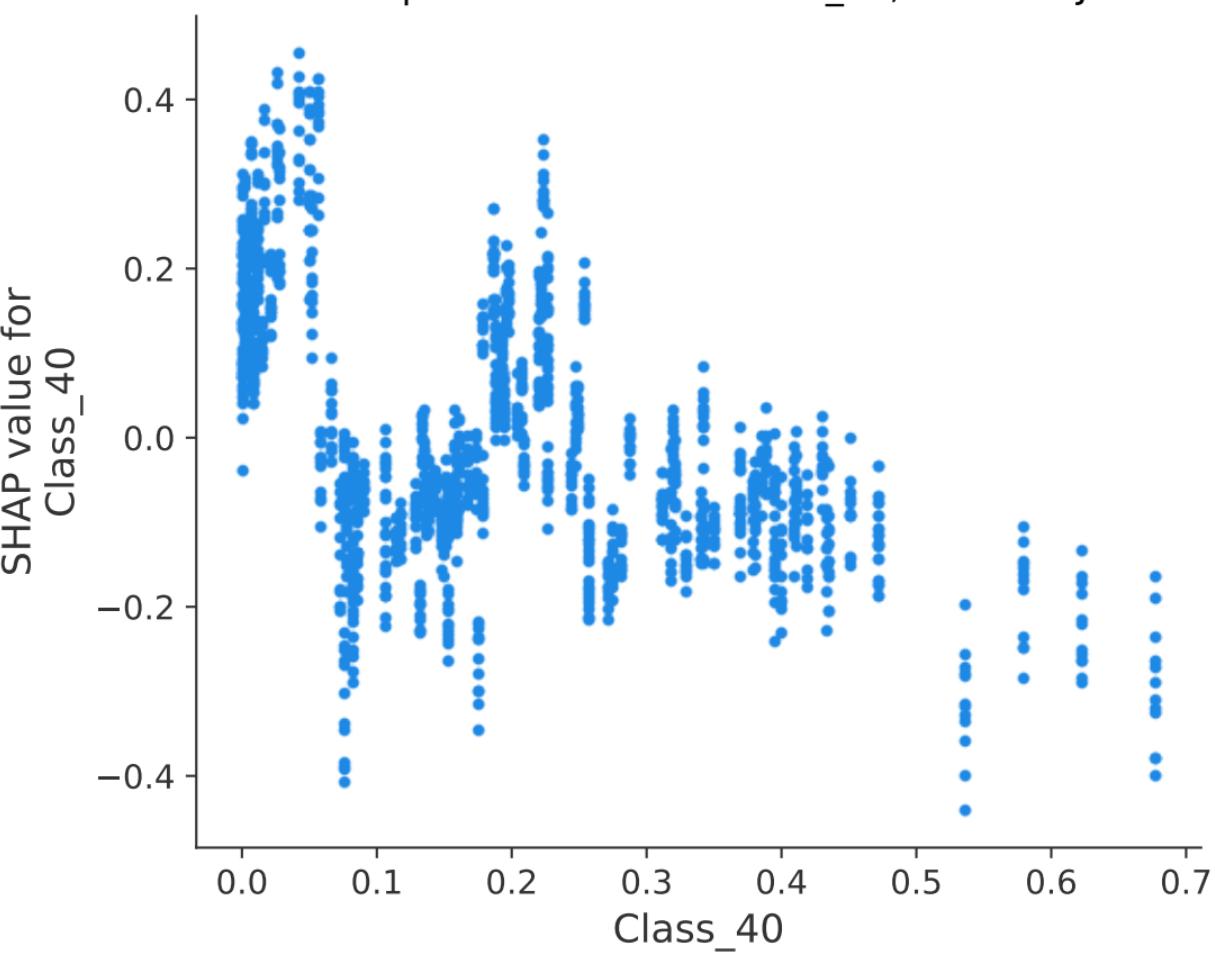


# SHAP Dependence Plot for Class\_40, Class 1 - Java

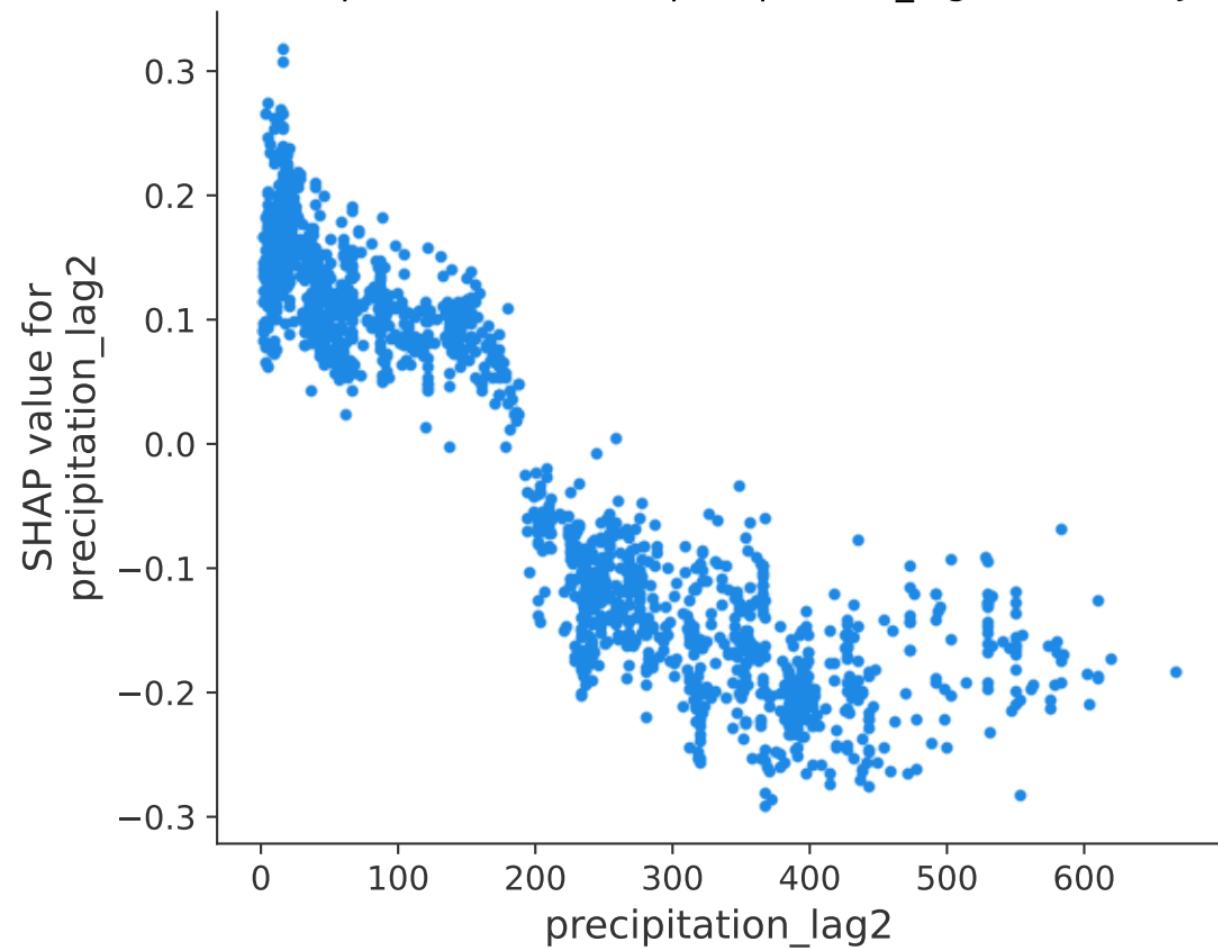


# SHAP Dependence Plot for Class\_40, Class 2 - Java

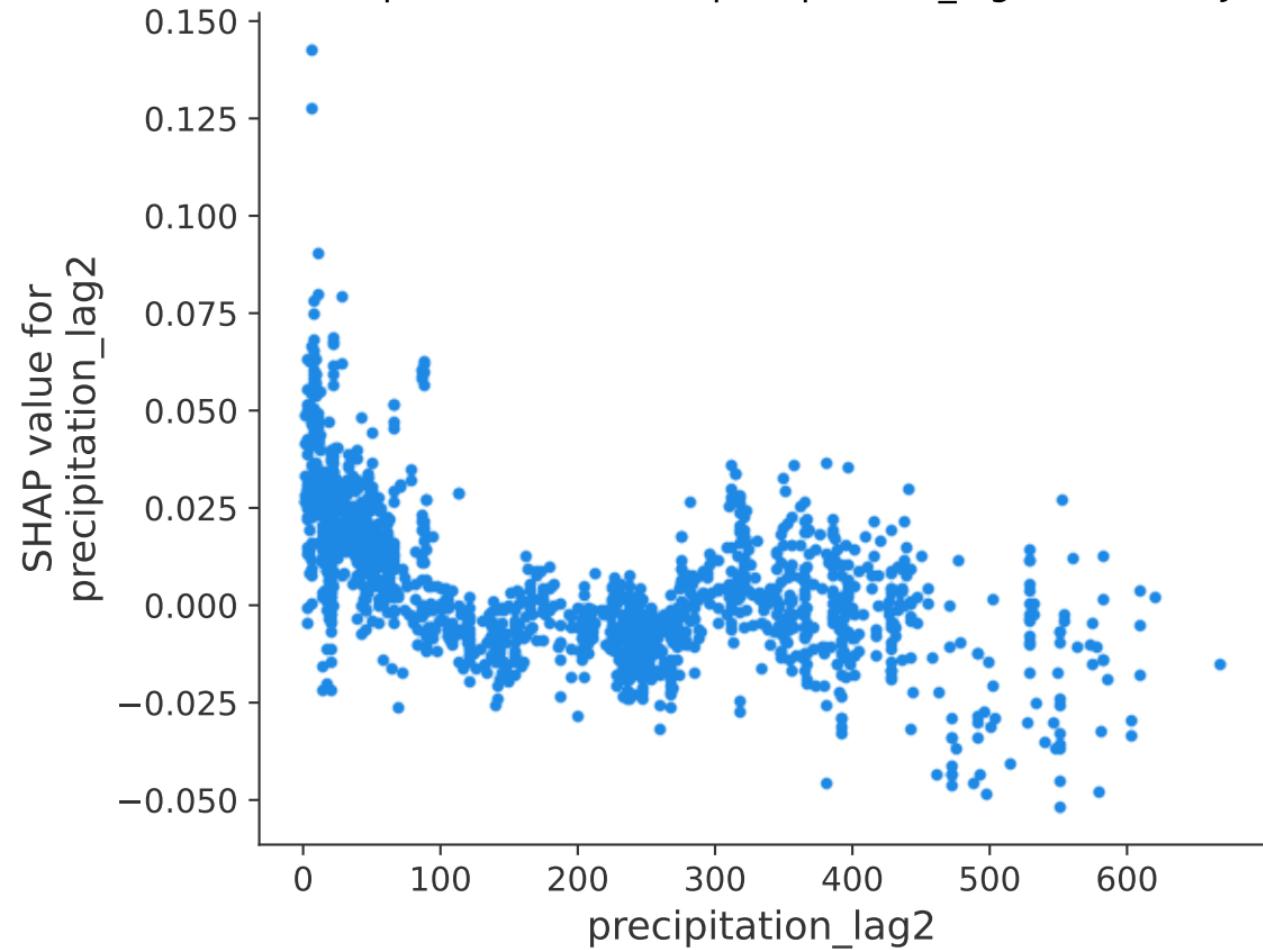
SHAP value for  
Class\_40



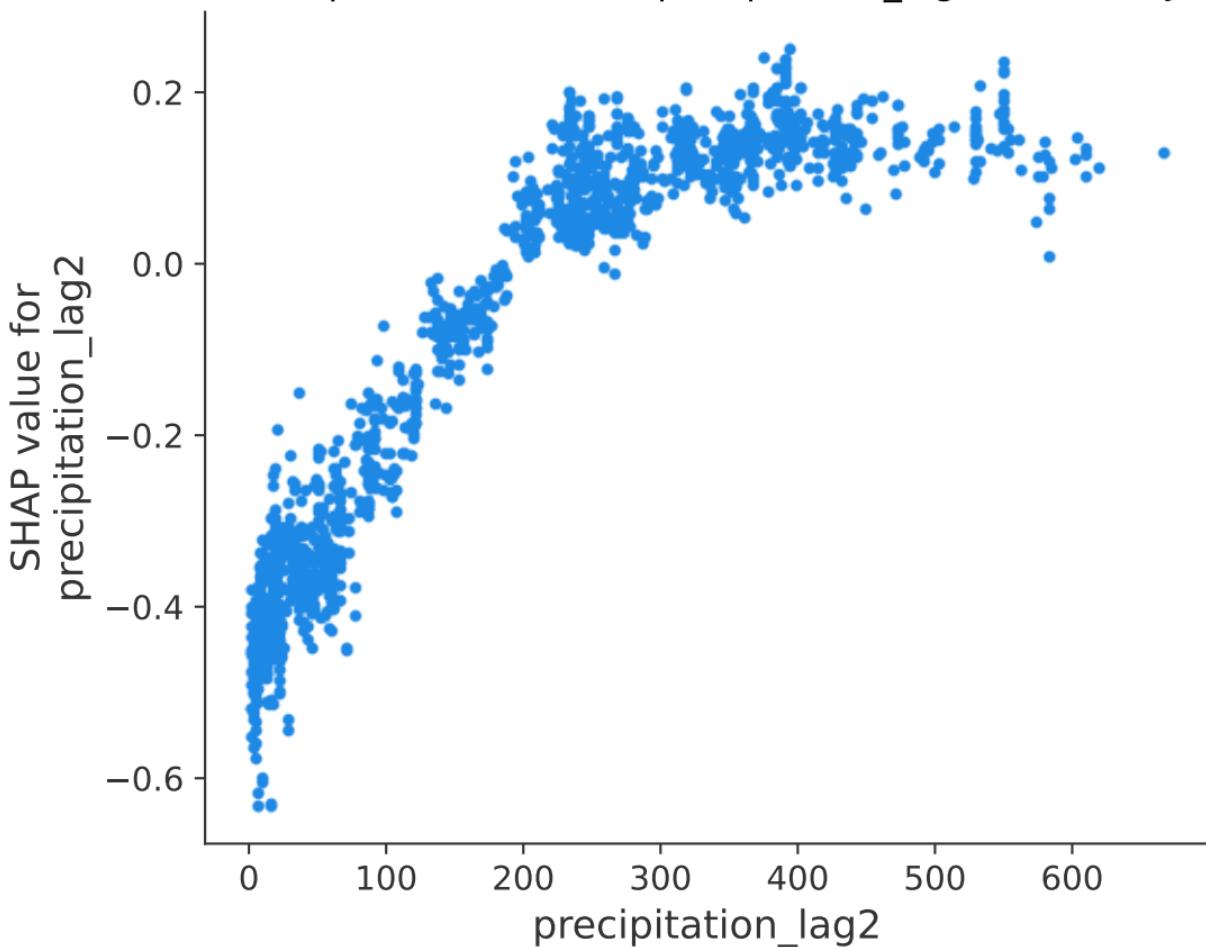
# SHAP Dependence Plot for precipitation\_lag2, Class 0 - Java



# SHAP Dependence Plot for precipitation\_lag2, Class 1 - Java



# SHAP Dependence Plot for precipitation\_lag2, Class 2 - Java



# SHAP Dependence Plot for Class\_20, Class 0 - Java

SHAP value for  
Class\_20

0.2

0.0

-0.2

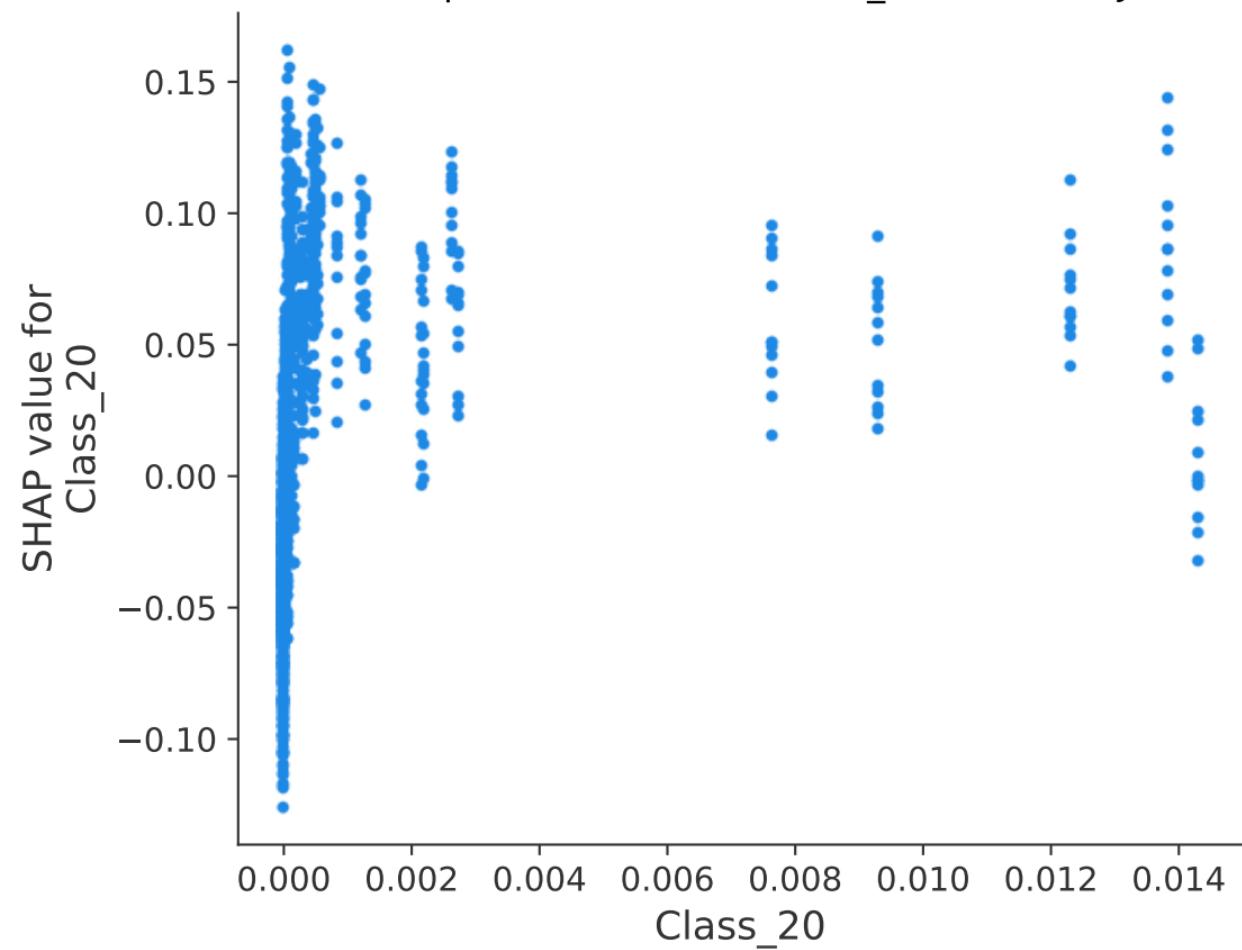
-0.4

-0.6

0.000 0.004 0.008 0.010 0.012 0.014

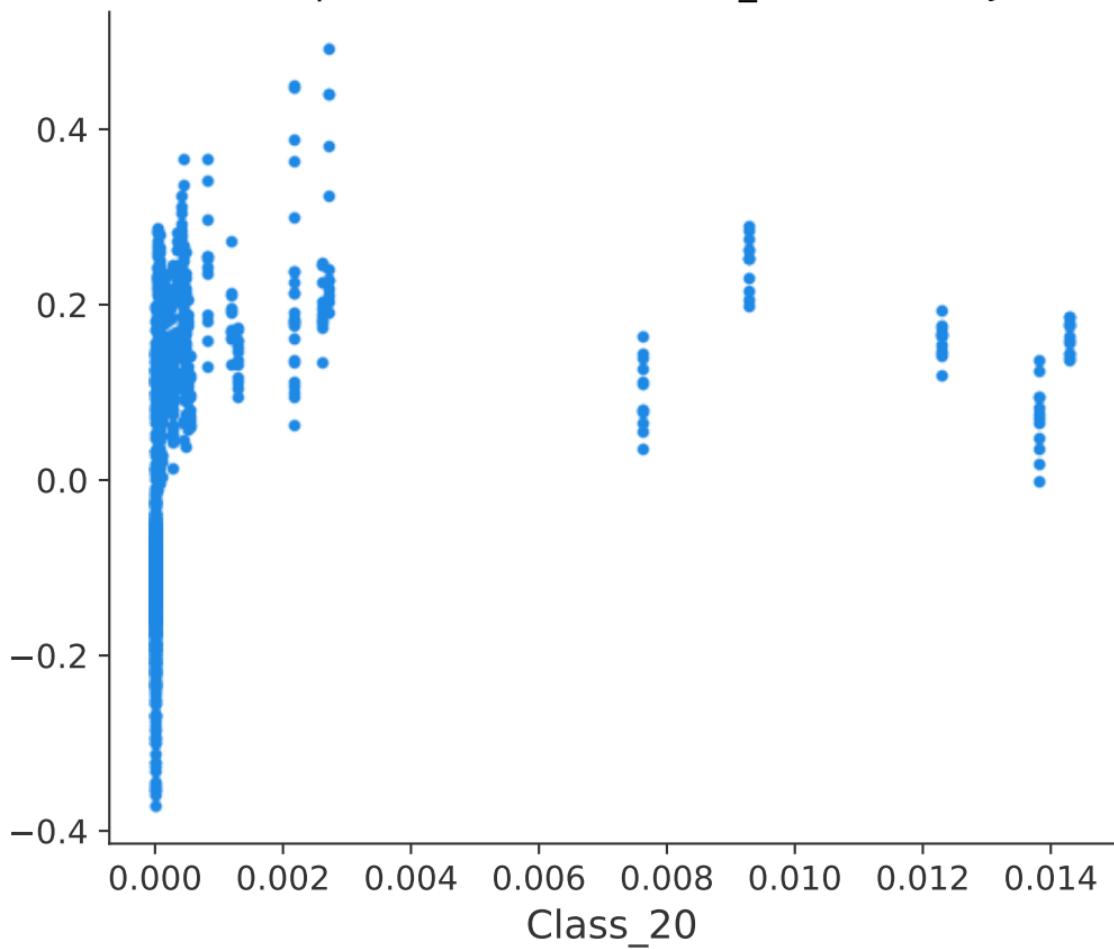
Class\_20

# SHAP Dependence Plot for Class\_20, Class 1 - Java

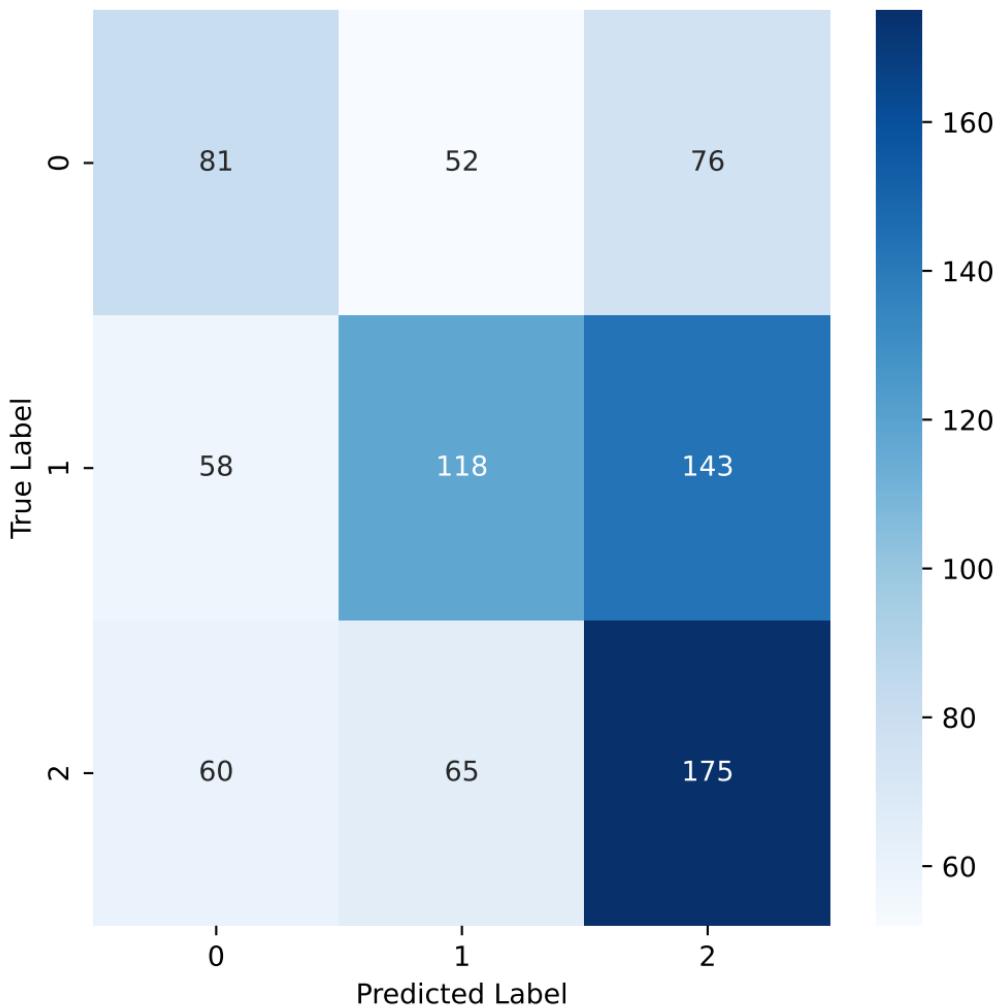


# SHAP Dependence Plot for Class\_20, Class 2 - Java

SHAP value for  
Class\_20



### Confusion Matrix - Sulawesi

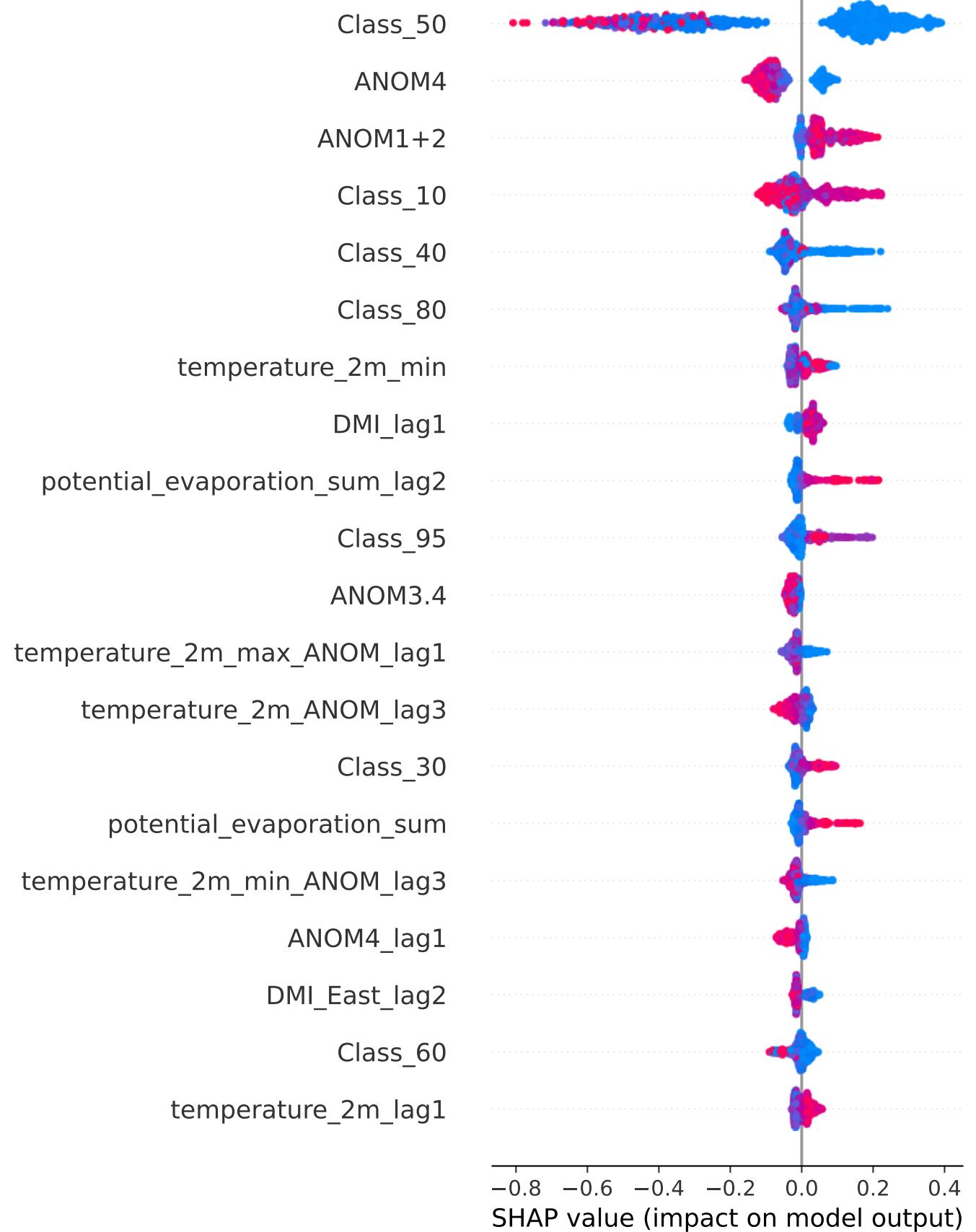


## SHAP Beeswarm Plot for Class 0 - Sulawesi

High

Feature value

Low

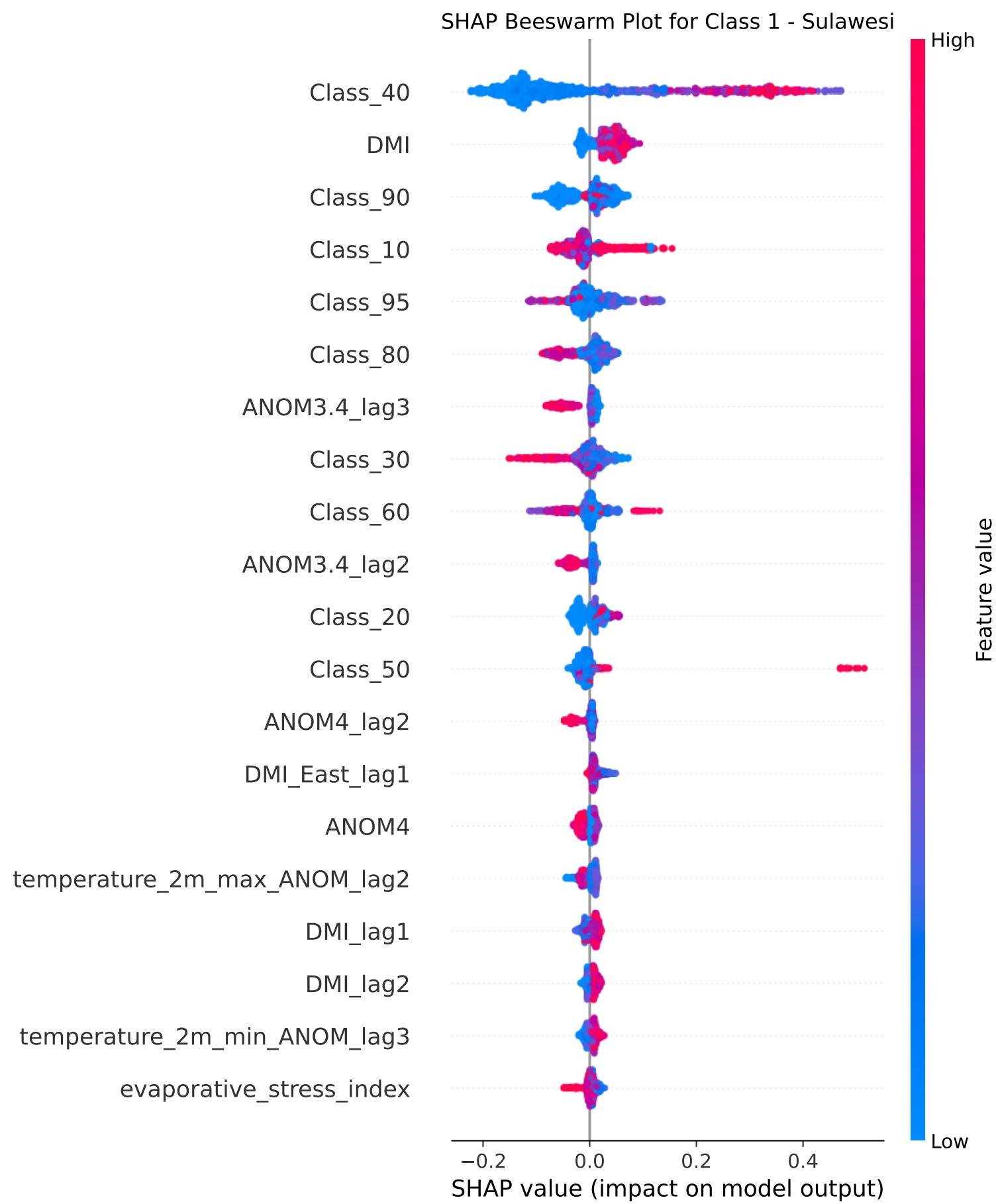


## SHAP Beeswarm Plot for Class 1 - Sulawesi

High

Feature value

Low

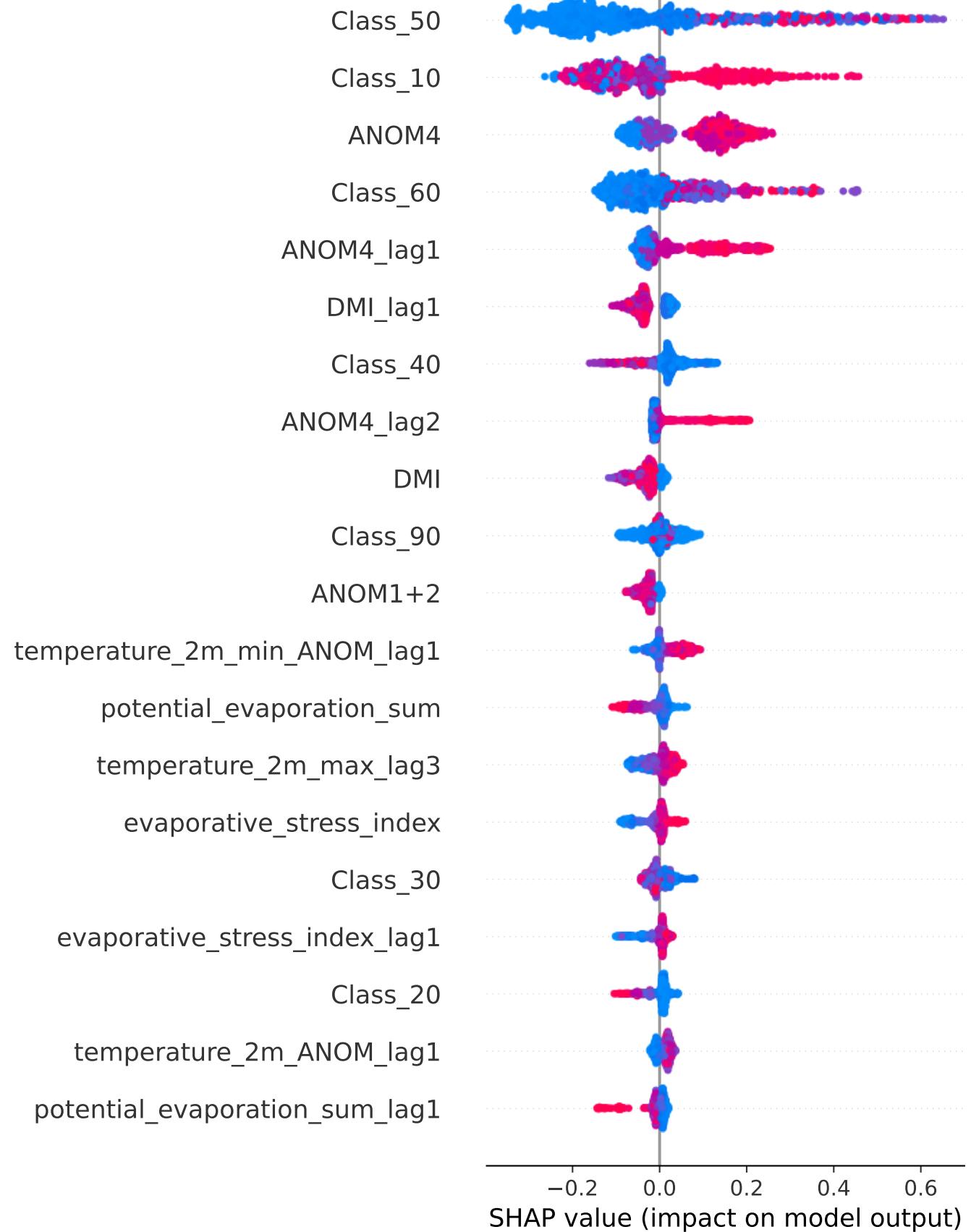


## SHAP Beeswarm Plot for Class 2 - Sulawesi

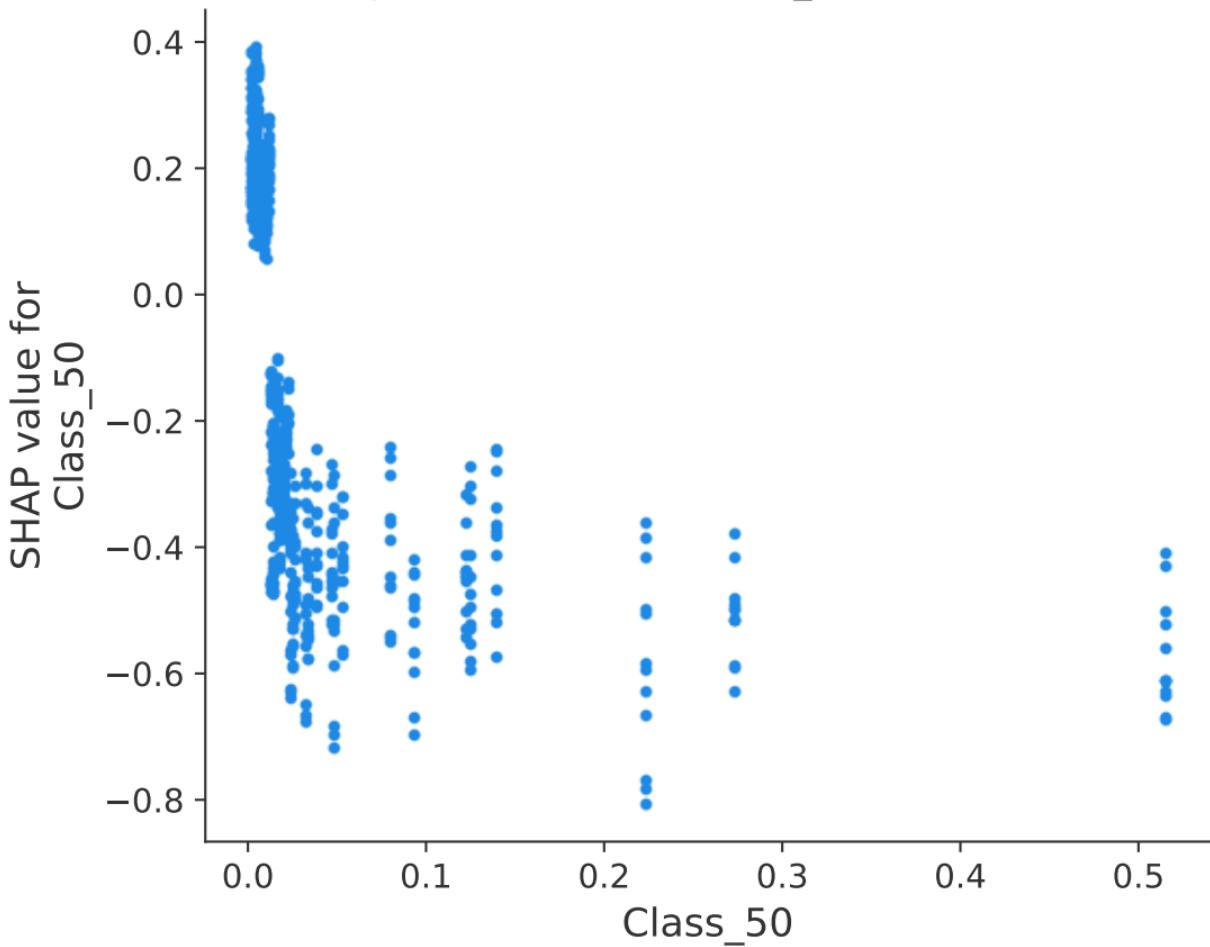
High

Feature value

Low



# SHAP Dependence Plot for Class\_50, Class 0 - Sulawesi



# SHAP Dependence Plot for Class\_50, Class 1 - Sulawesi

SHAP value for  
Class\_50

0.5  
0.4  
0.3  
0.2  
0.1  
0.0

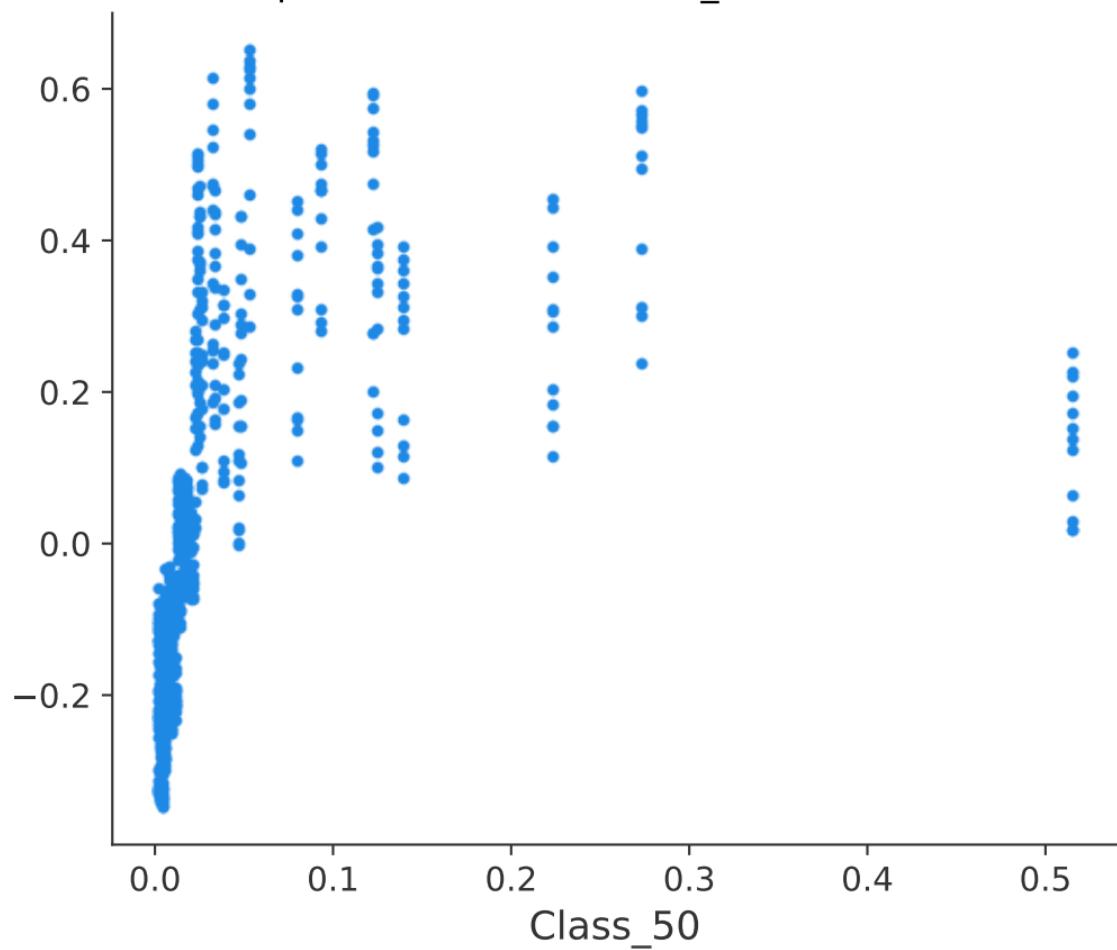
0.0 0.1 0.2 0.3 0.4 0.5

Class\_50



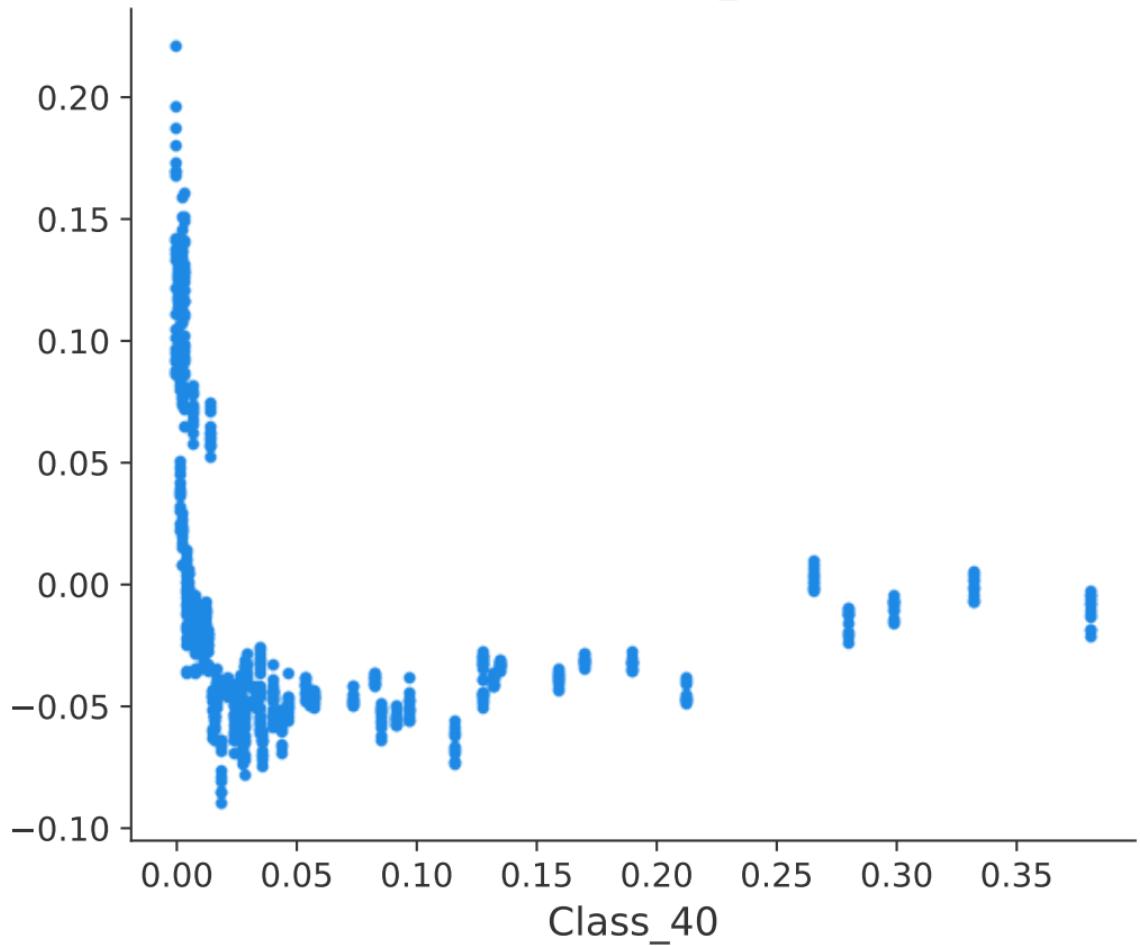
# SHAP Dependence Plot for Class\_50, Class 2 - Sulawesi

SHAP value for  
Class\_50



# SHAP Dependence Plot for Class\_40, Class 0 - Sulawesi

SHAP value for  
Class\_40



# SHAP Dependence Plot for Class\_40, Class 1 - Sulawesi

SHAP value for  
Class\_40

0.5

0.4

0.3

0.2

0.1

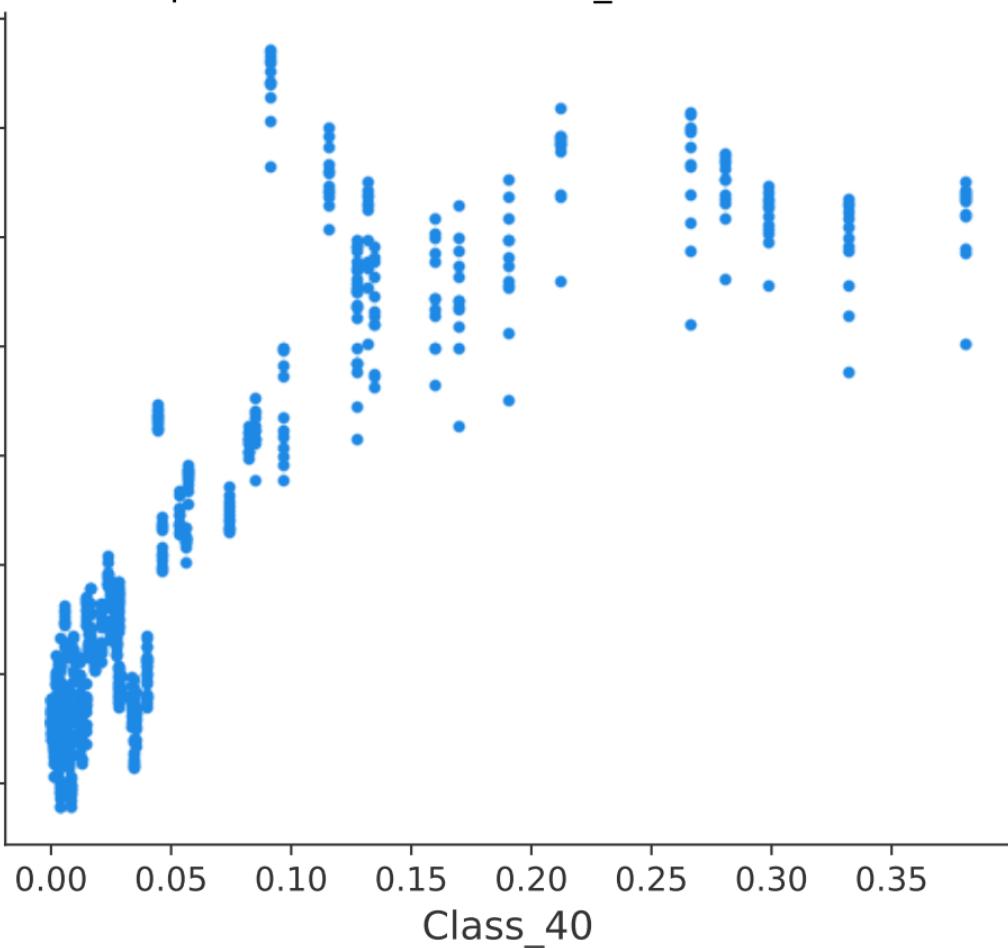
0.0

-0.1

-0.2

0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35

Class\_40



# SHAP Dependence Plot for Class\_40, Class 2 - Sulawesi

SHAP value for  
Class\_40

0.10

0.05

0.00

-0.05

-0.10

-0.15

0.00

0.05

0.10

0.15

0.20

0.25

0.30

0.35

Class\_40

SHAP Dependence Plot for Class\_10, Class 0 - Sulawesi

SHAP value for  
Class\_10

0.20

0.15

0.10

0.05

0.00

-0.05

-0.10

0.2

0.3

0.4

0.5

0.6

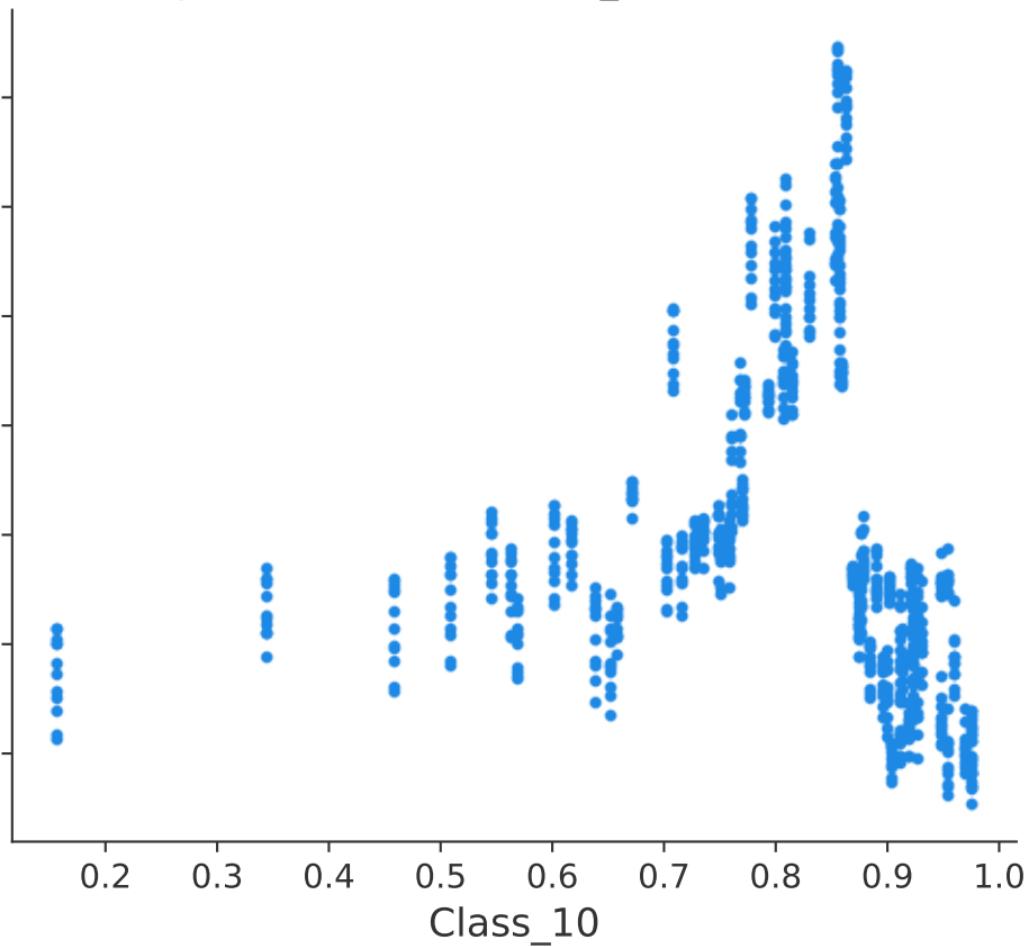
0.7

0.8

0.9

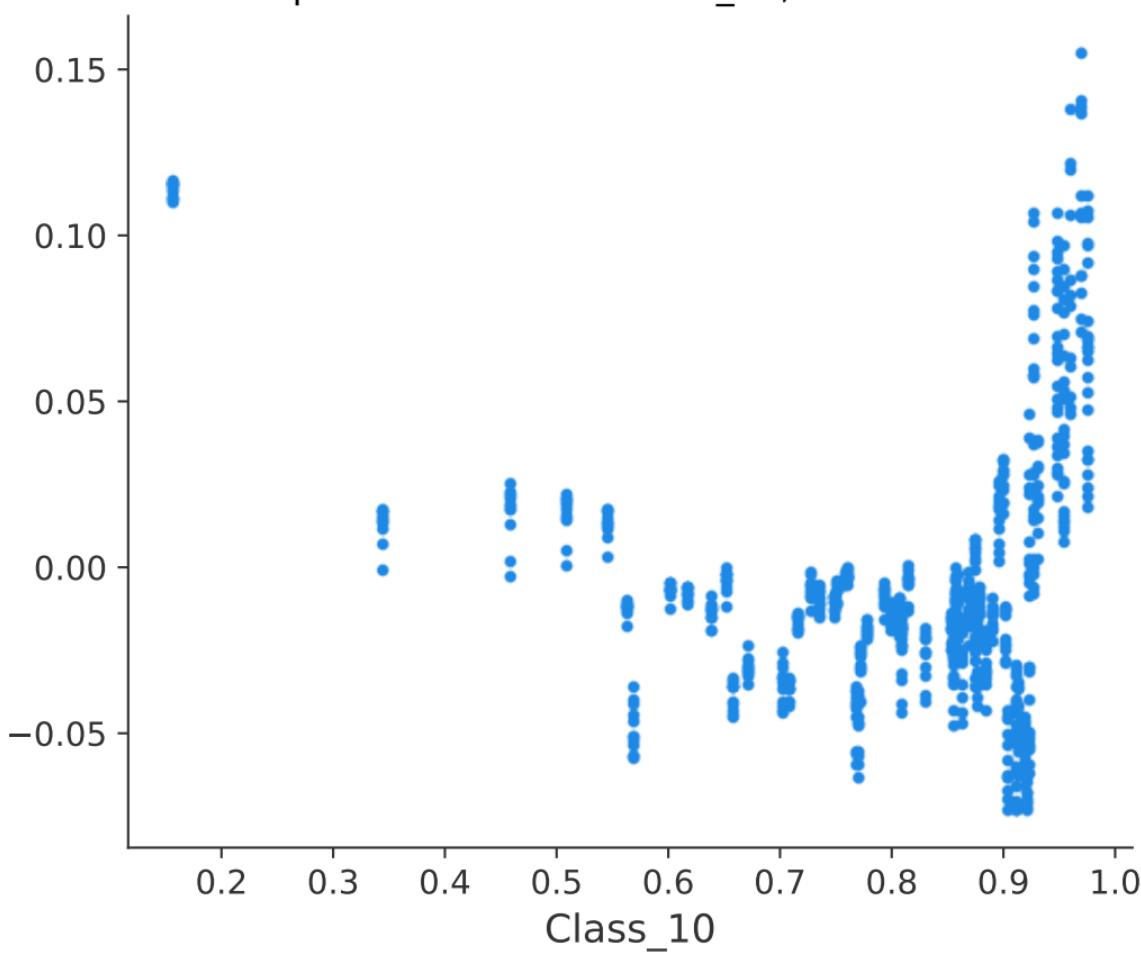
1.0

Class\_10



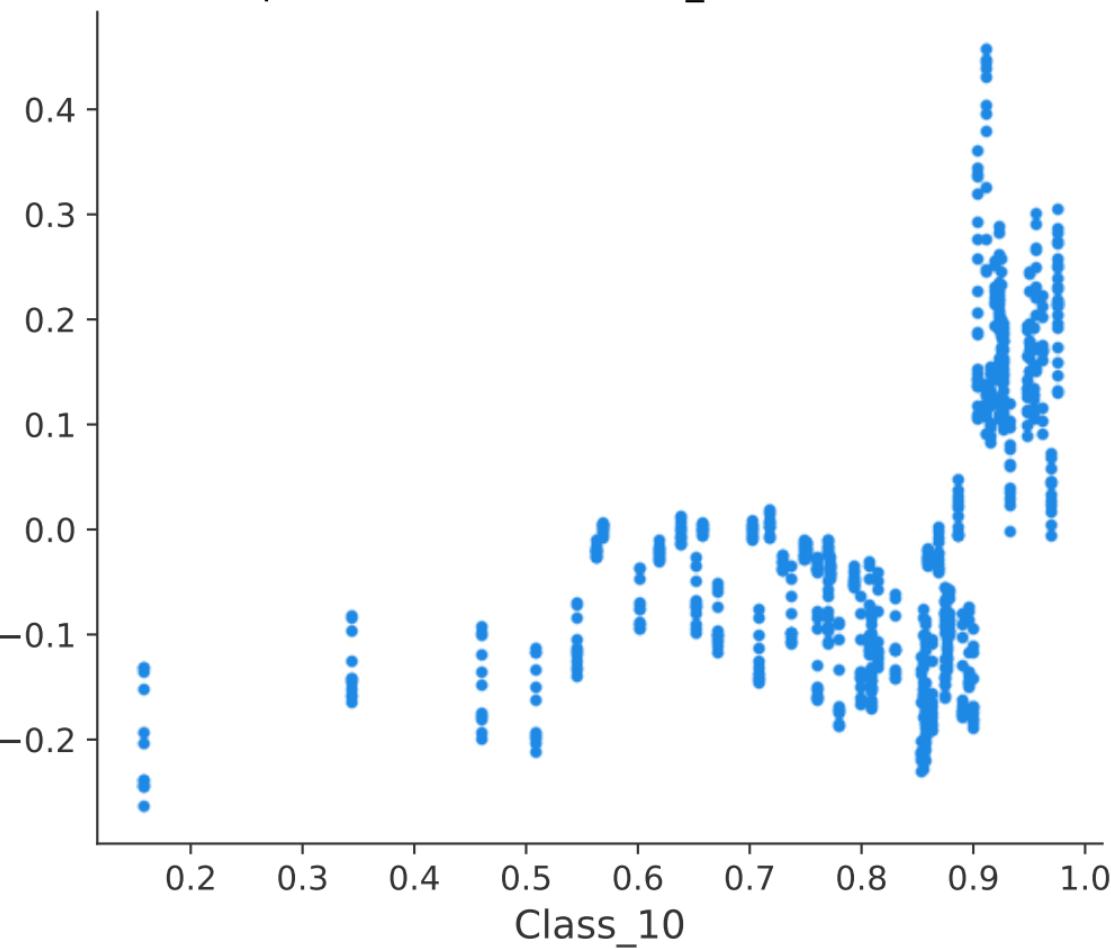
SHAP Dependence Plot for Class\_10, Class 1 - Sulawesi

SHAP value for  
Class\_10



SHAP Dependence Plot for Class\_10, Class 2 - Sulawesi

SHAP value for  
Class\_10



# SHAP Dependence Plot for ANOM4, Class 0 - Sulawesi

SHAP value for  
ANOM4

0.10

0.05

0.00

-0.05

-0.10

-0.15

-0.50

-0.25

0.00

0.25

0.50

0.75

1.00

1.25

1.50

ANOM4

# SHAP Dependence Plot for ANOM4, Class 1 - Sulawesi

SHAP value for  
ANOM4

0.02

0.01

0.00

-0.01

-0.02

-0.03

-0.50

-0.25

0.00

0.25

0.50

0.75

1.00

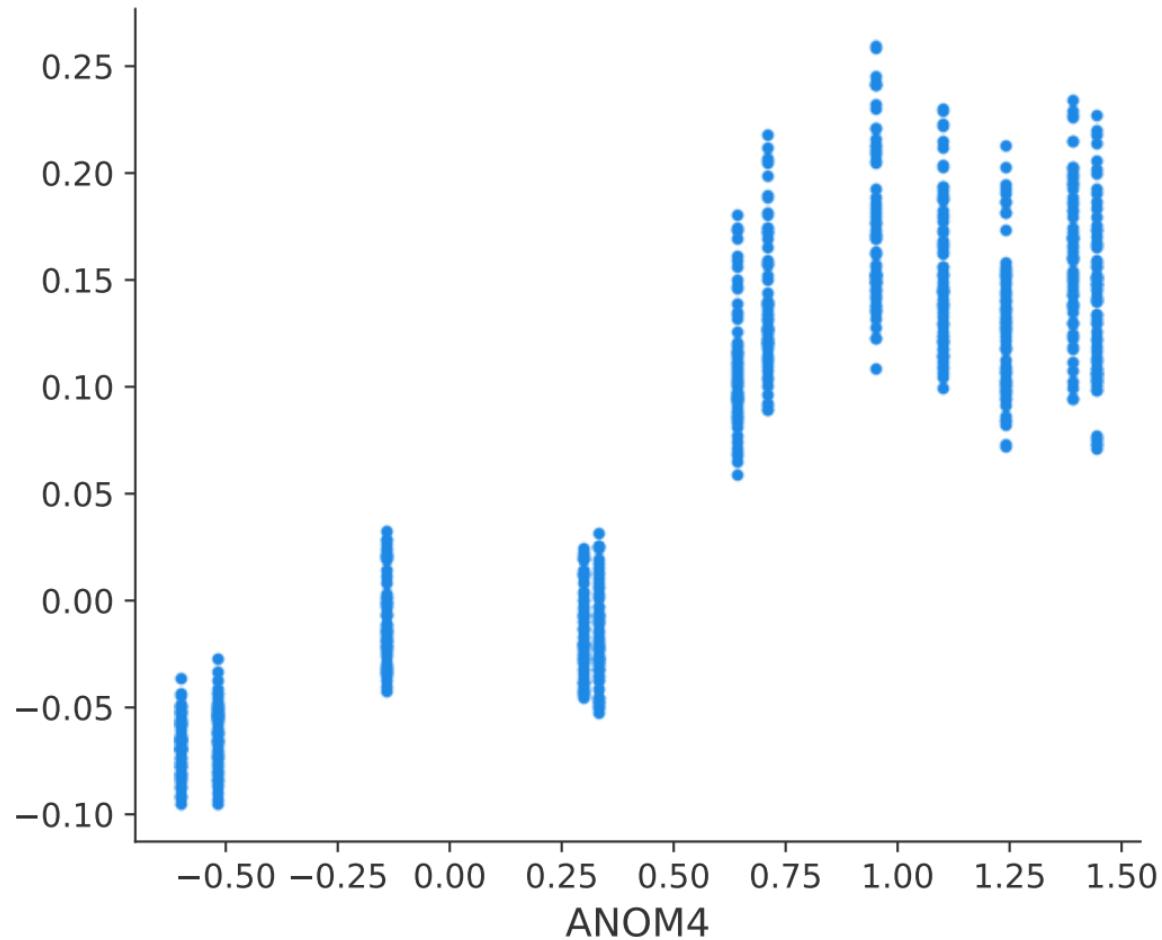
1.25

1.50

ANOM4

# SHAP Dependence Plot for ANOM4, Class 2 - Sulawesi

SHAP value for  
ANOM4



# SHAP Dependence Plot for Class\_60, Class 0 - Sulawesi

SHAP value for  
Class\_60

0.000 0.001 0.002 0.003 0.004 0.005 0.006 0.007 0.008

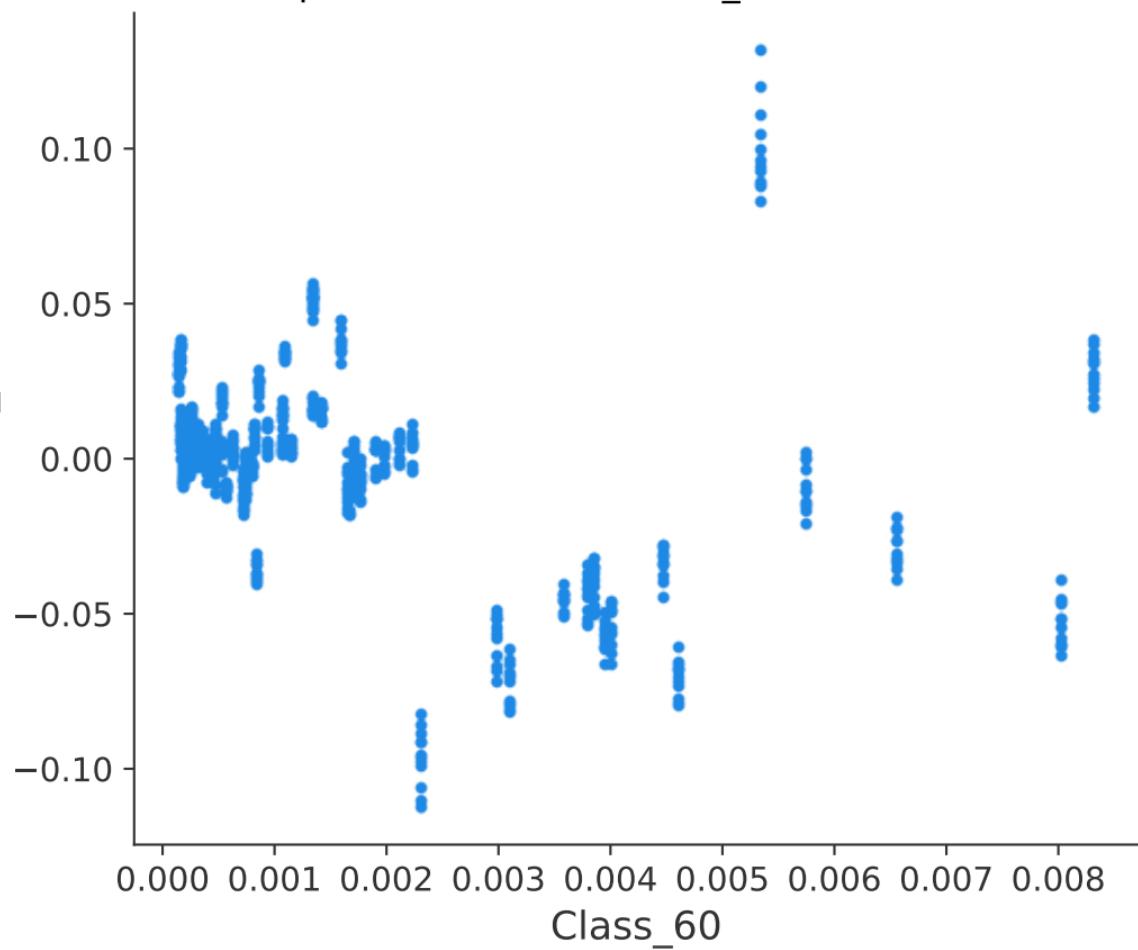
Class\_60

0.04  
0.02  
0.00  
-0.02  
-0.04  
-0.06  
-0.08

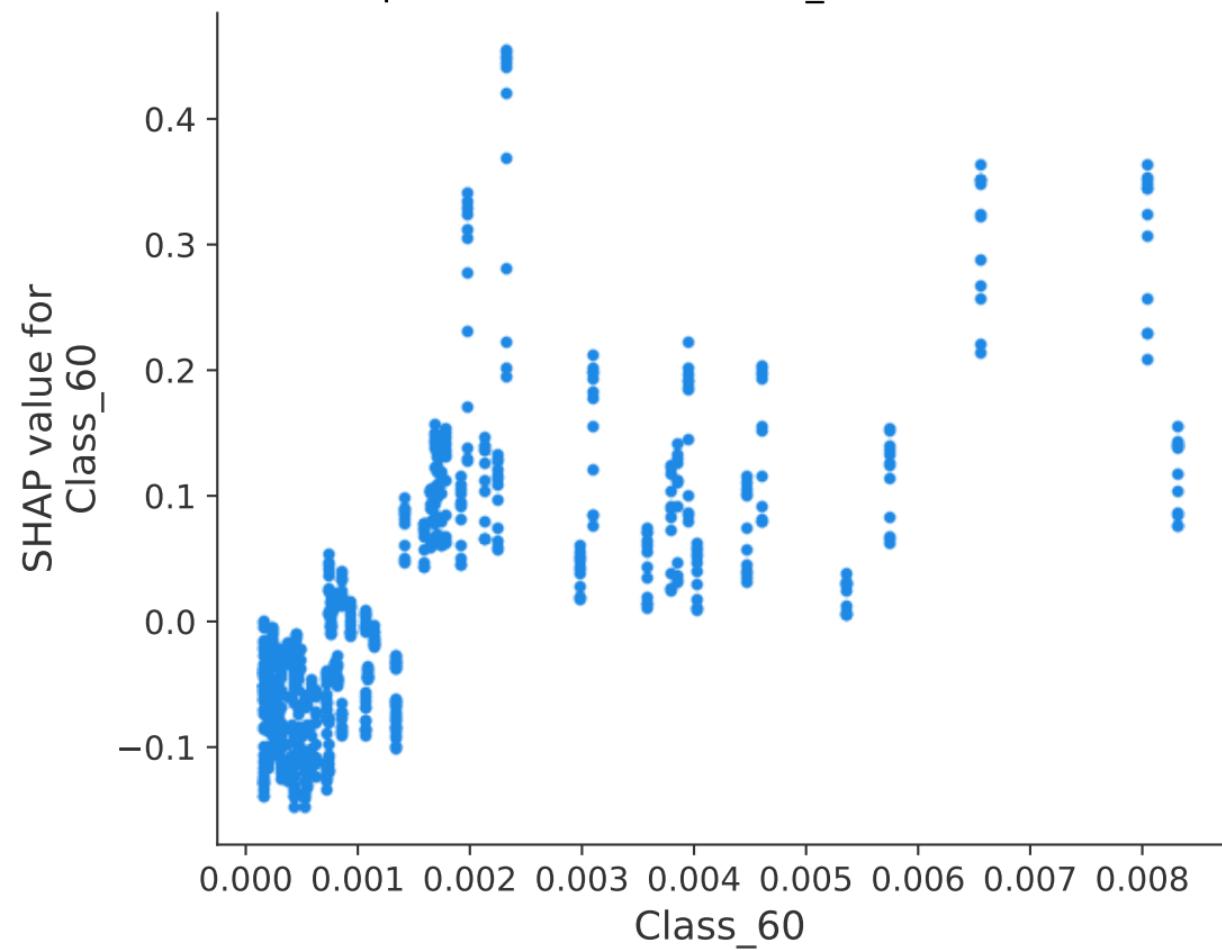


# SHAP Dependence Plot for Class\_60, Class 1 - Sulawesi

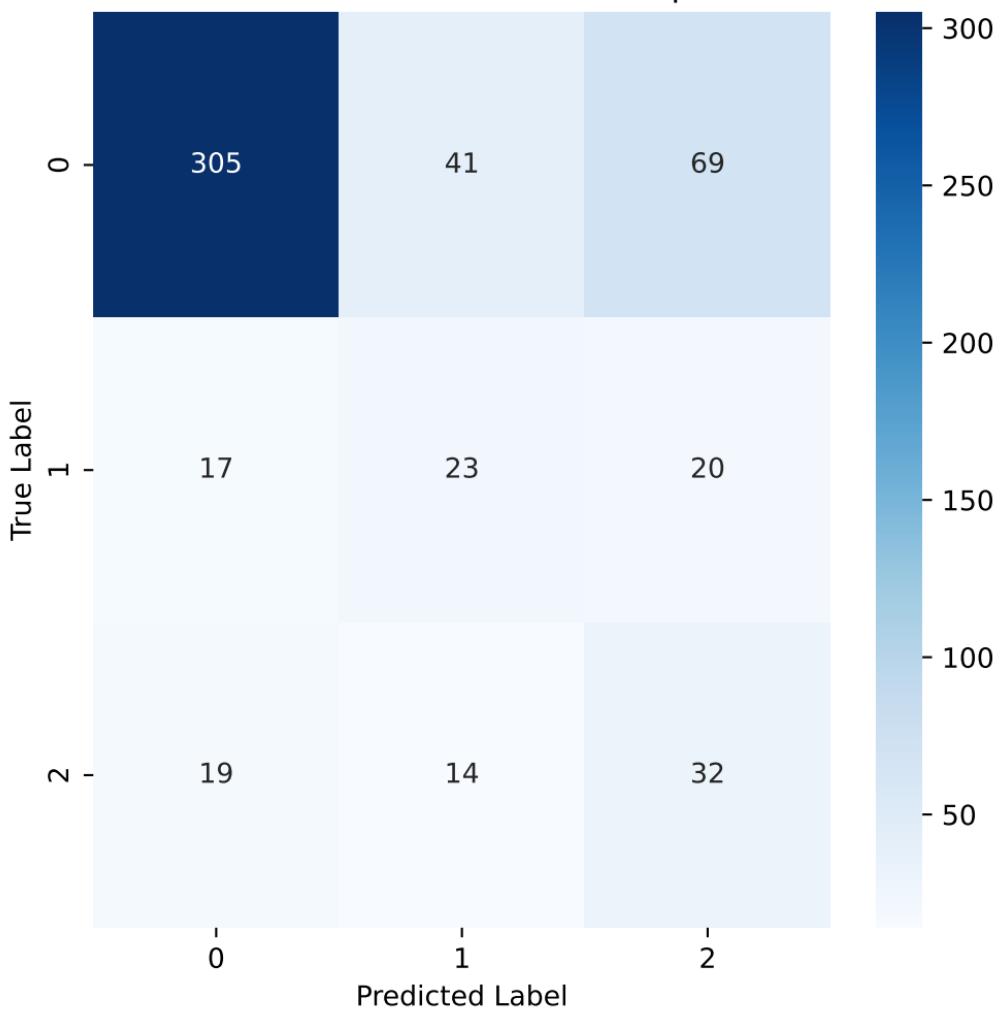
SHAP value for  
Class\_60



# SHAP Dependence Plot for Class\_60, Class 2 - Sulawesi

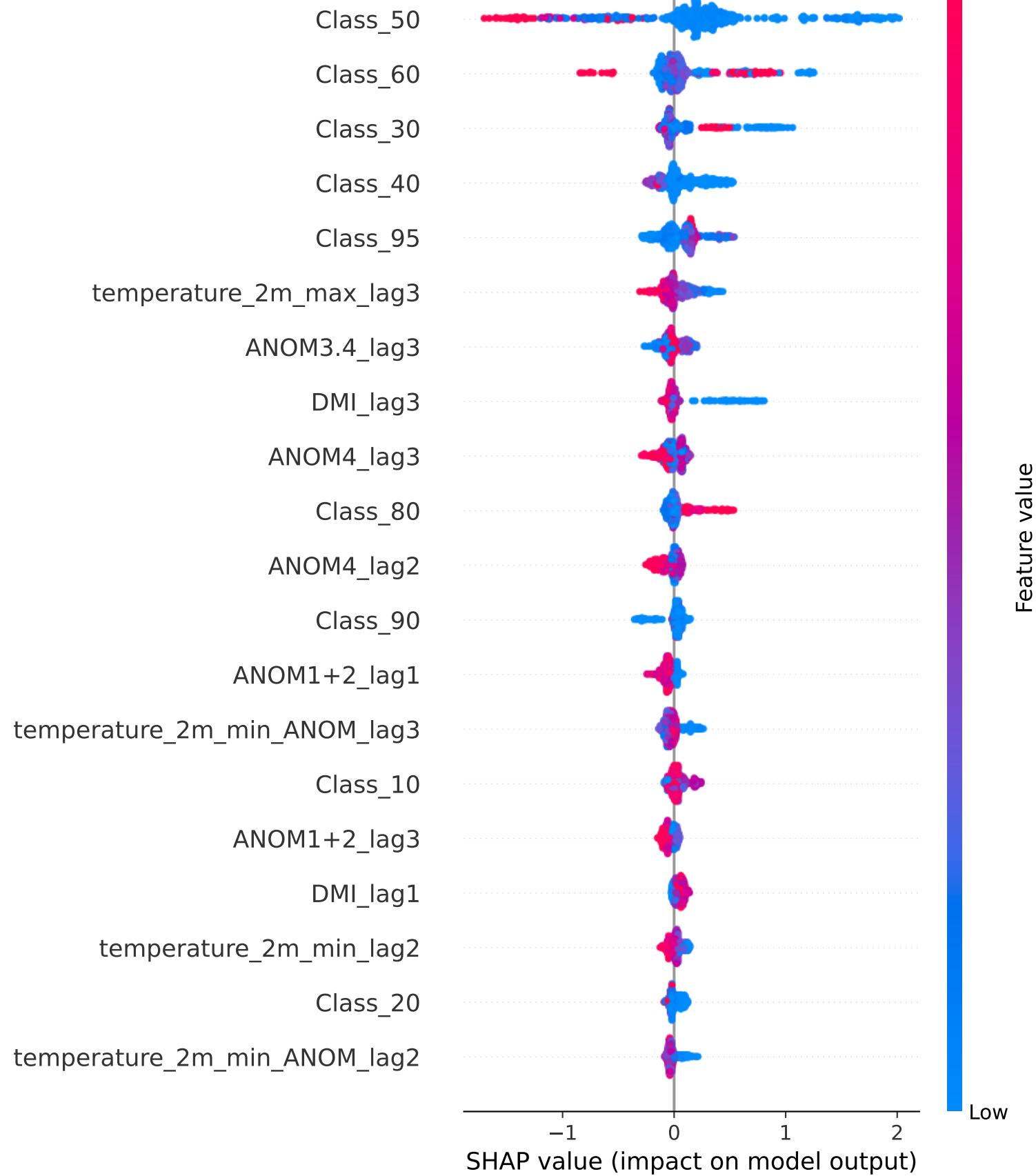


### Confusion Matrix - Maluku-Papua



SHAP Beeswarm Plot for Class 0 - Maluku-Papua

High



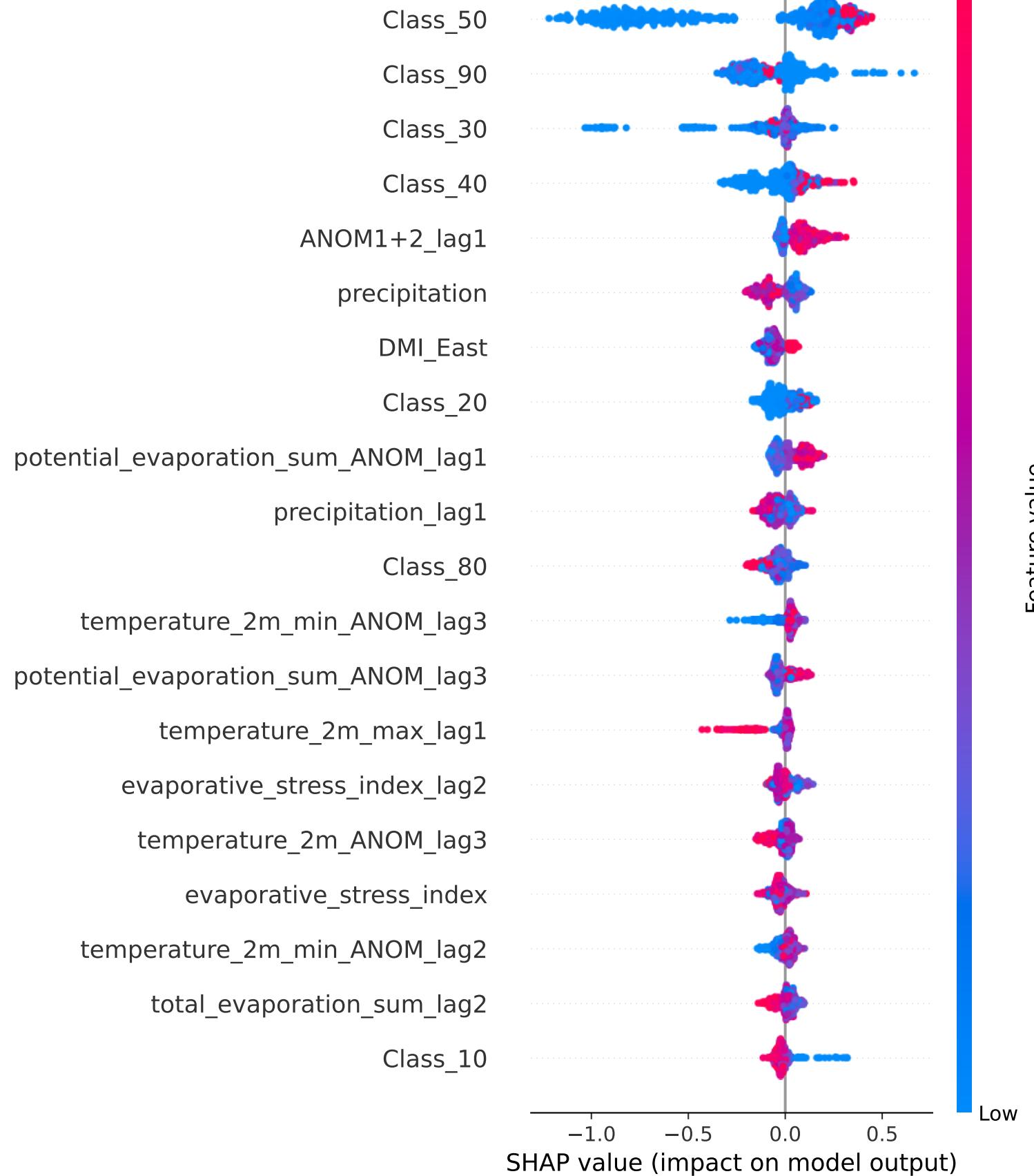
Low

## SHAP Beeswarm Plot for Class 1 - Maluku-Papua

High

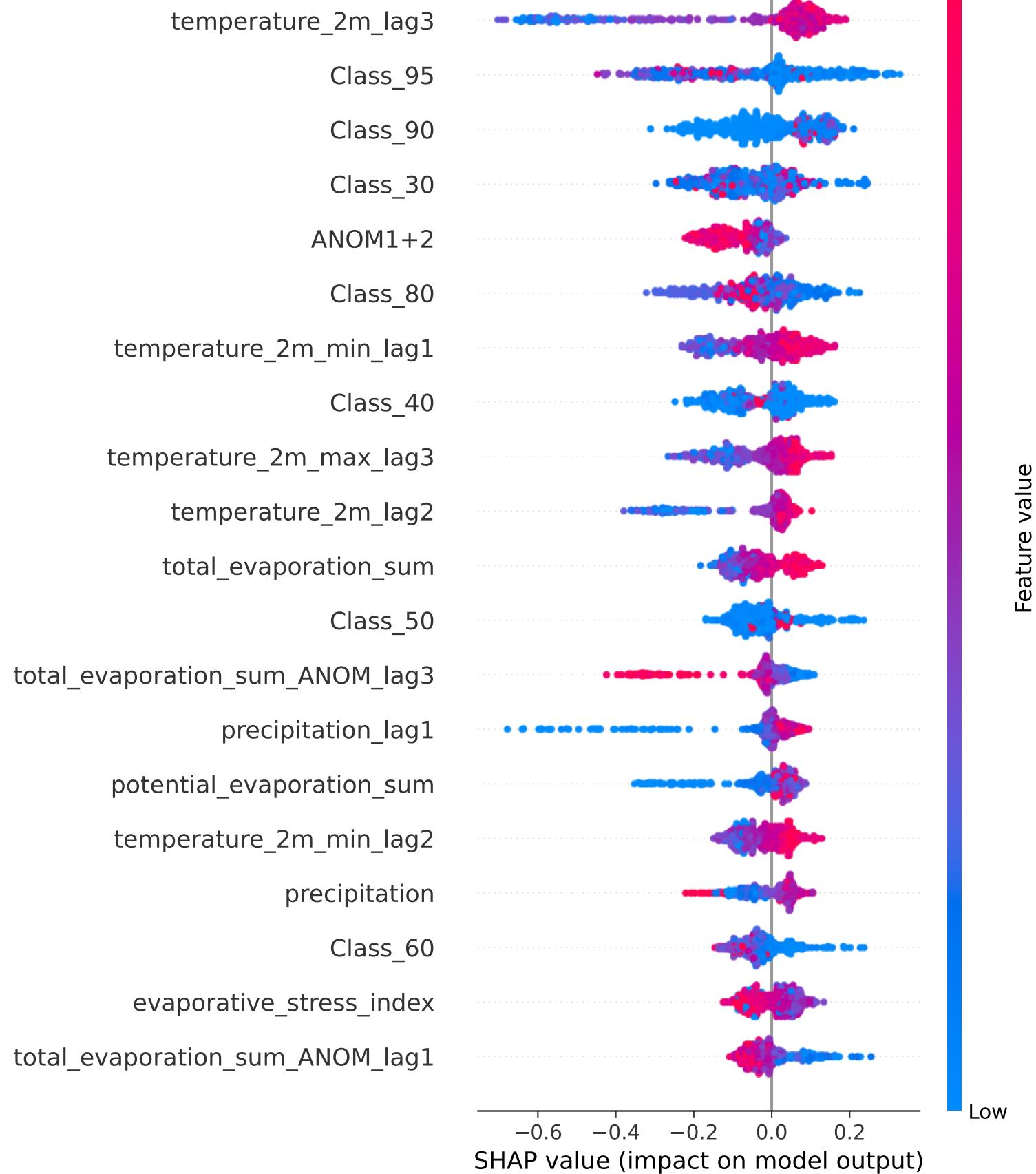
Feature value

Low

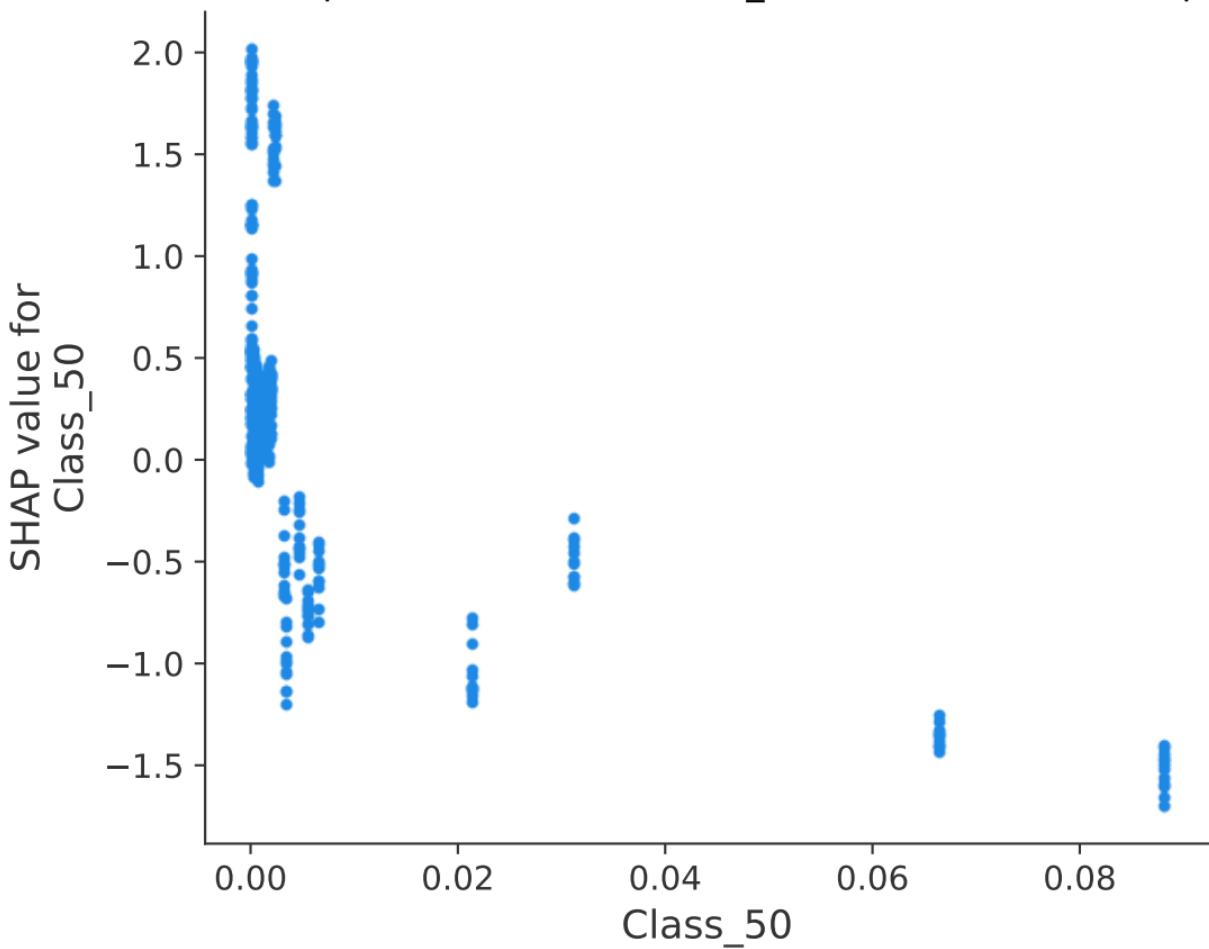


SHAP Beeswarm Plot for Class 2 - Maluku-Papua

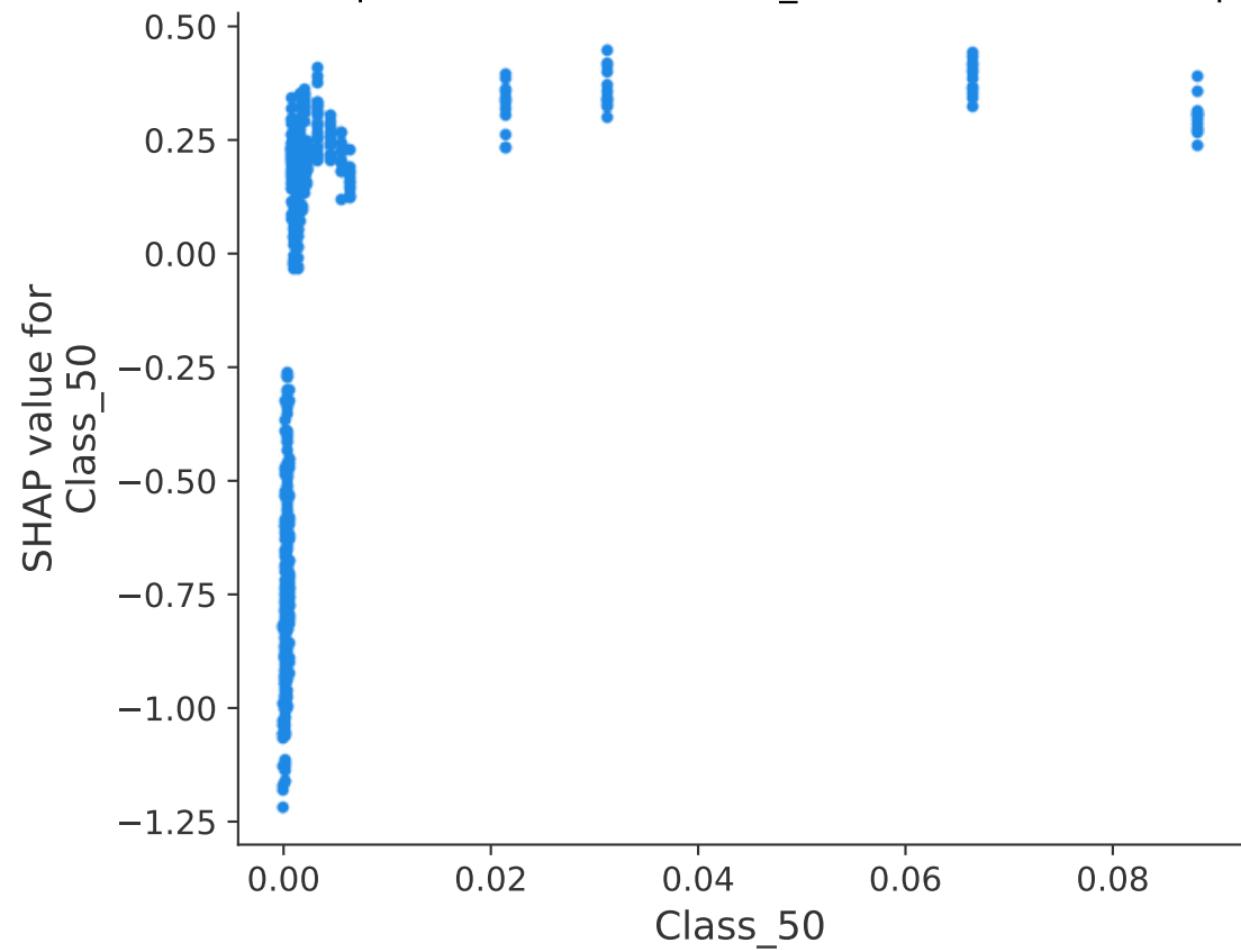
High



# SHAP Dependence Plot for Class\_50, Class 0 - Maluku-Papua

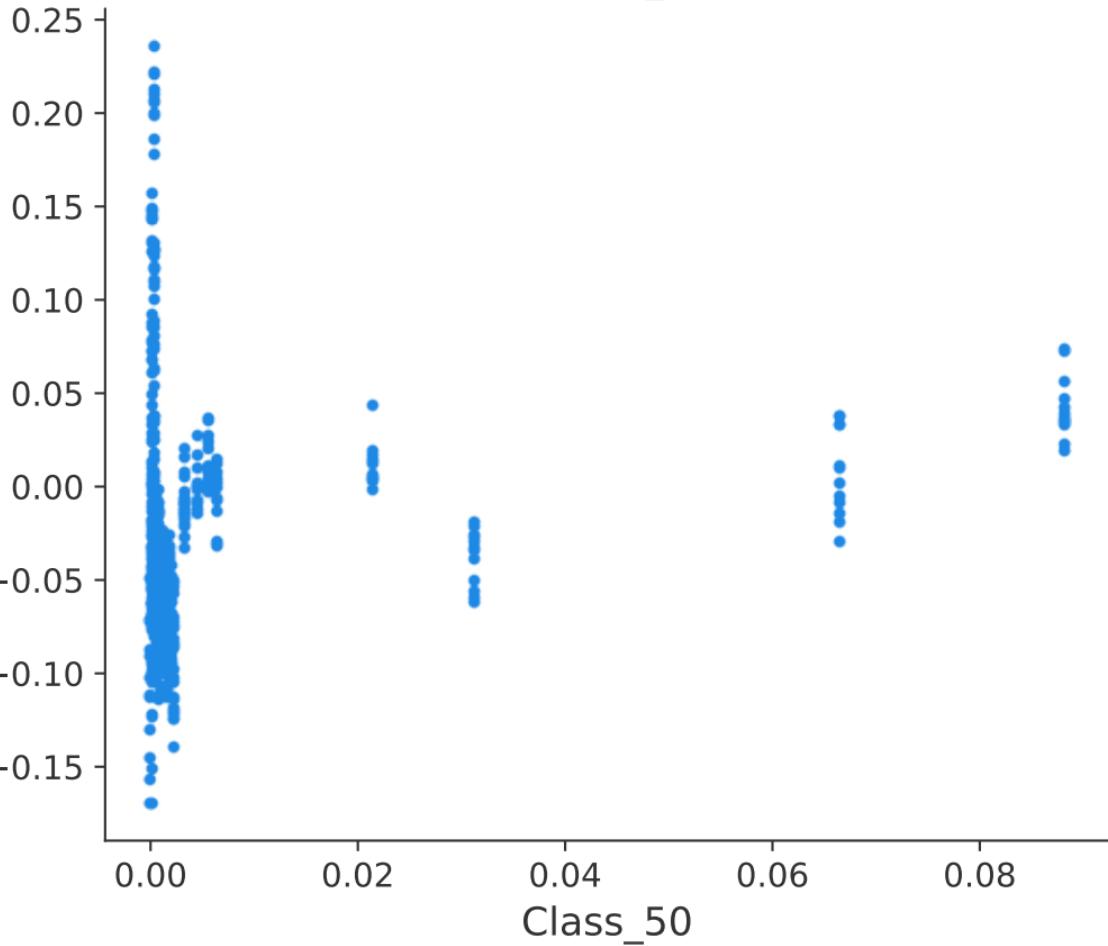


# SHAP Dependence Plot for Class\_50, Class 1 - Maluku-Papua



# SHAP Dependence Plot for Class\_50, Class 2 - Maluku-Papua

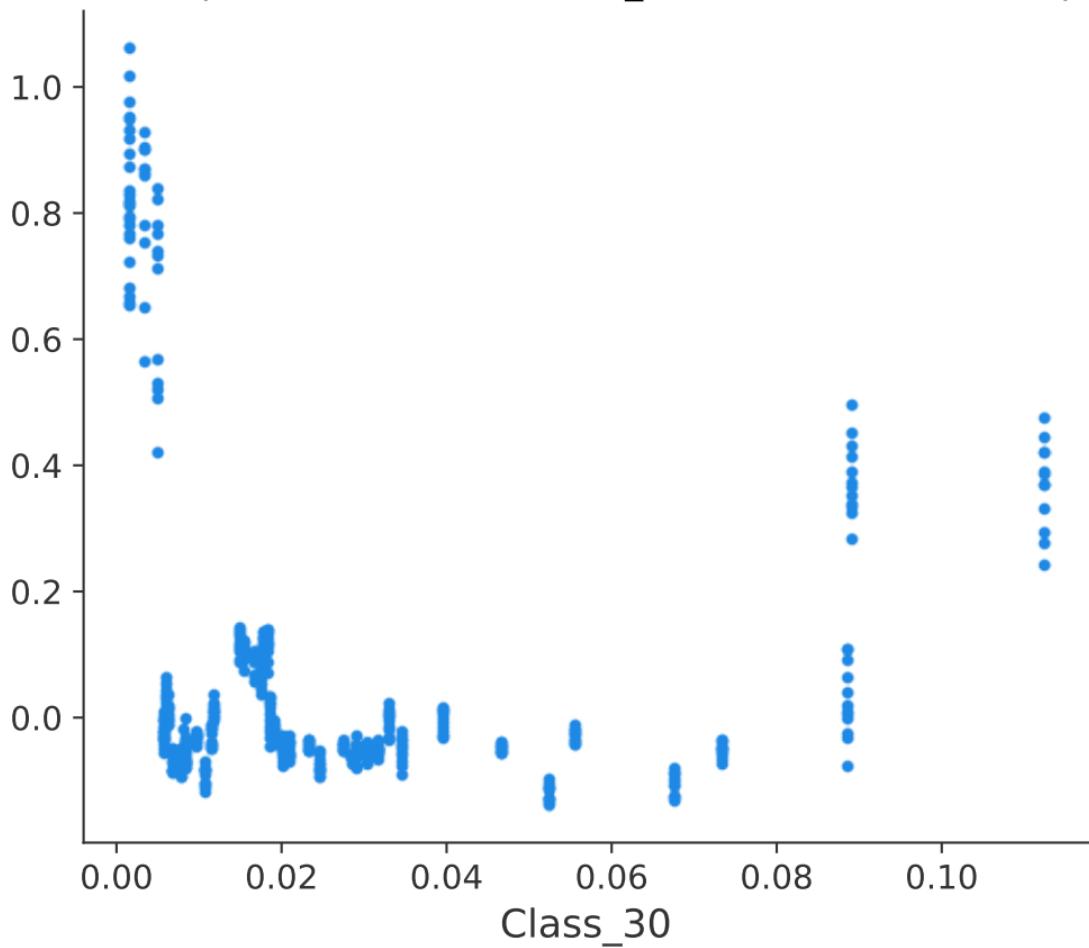
SHAP value for  
Class\_50



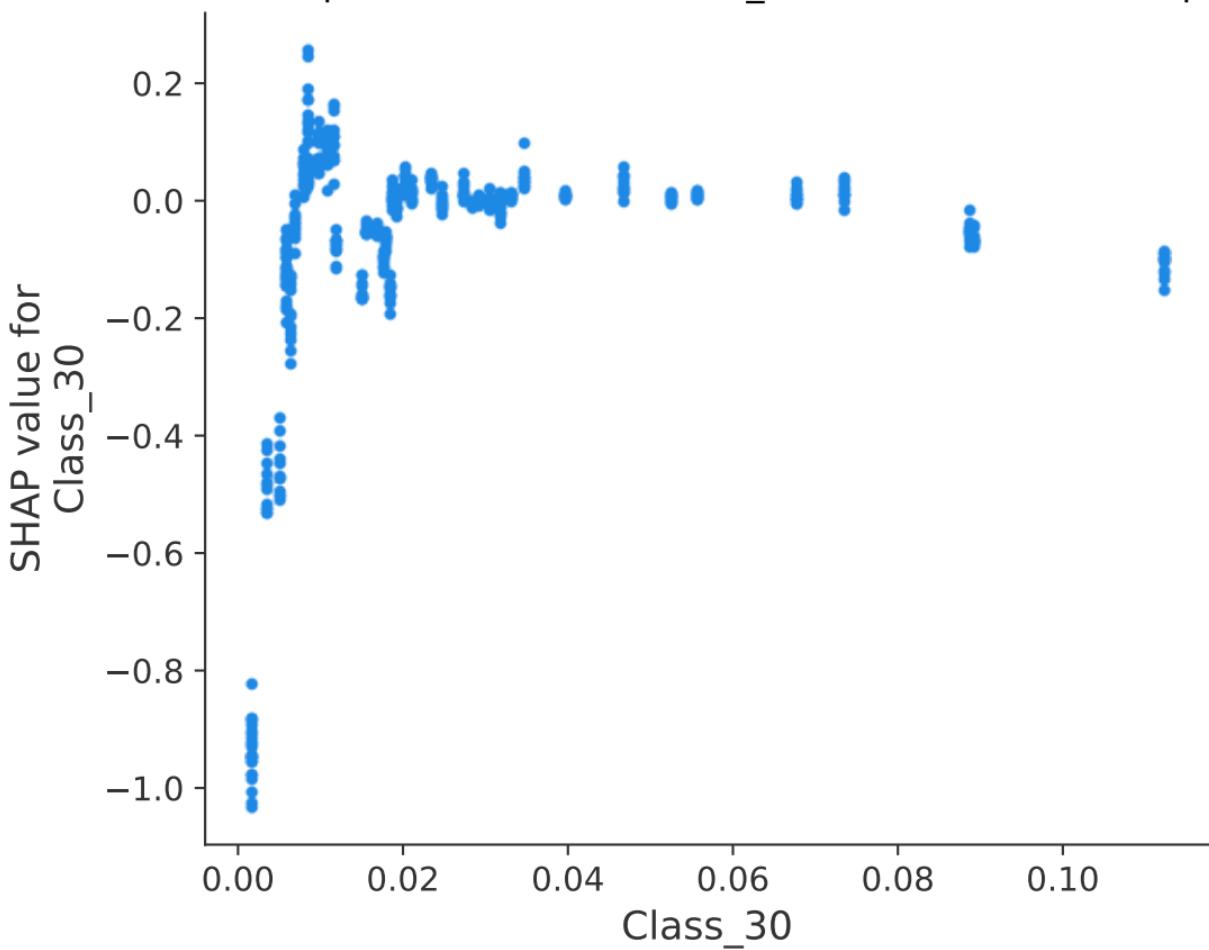
# SHAP Dependence Plot for Class\_30, Class 0 - Maluku-Papua

SHAP value for

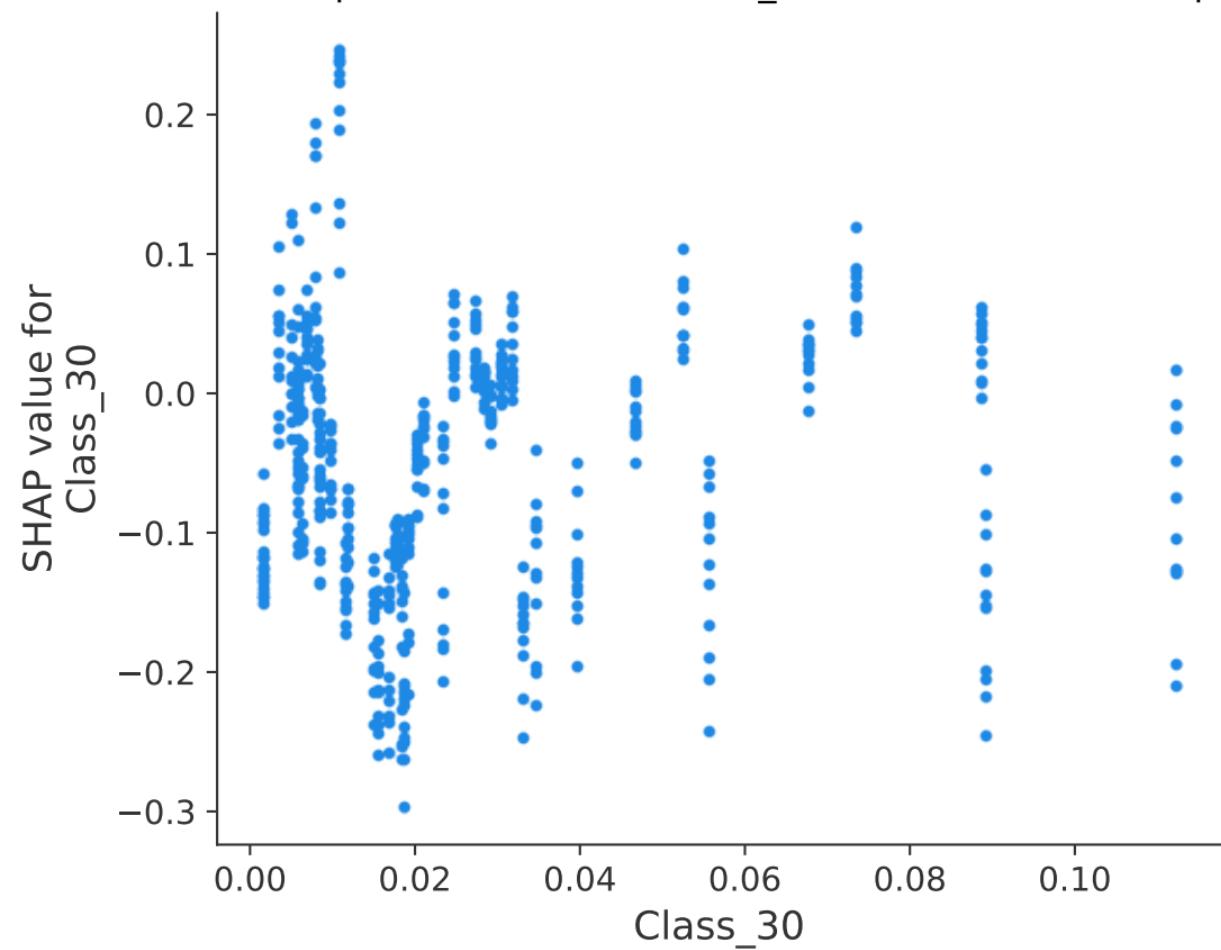
Class\_30



# SHAP Dependence Plot for Class\_30, Class 1 - Maluku-Papua

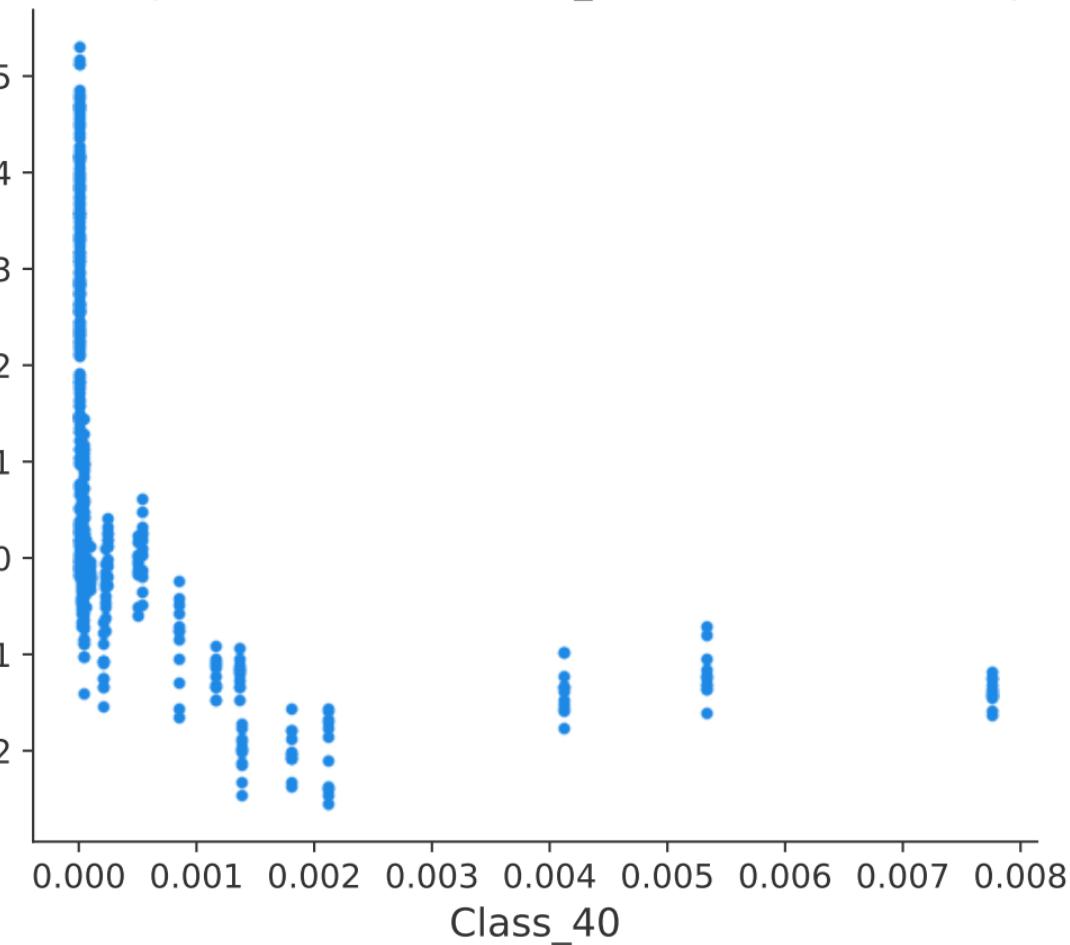


# SHAP Dependence Plot for Class\_30, Class 2 - Maluku-Papua

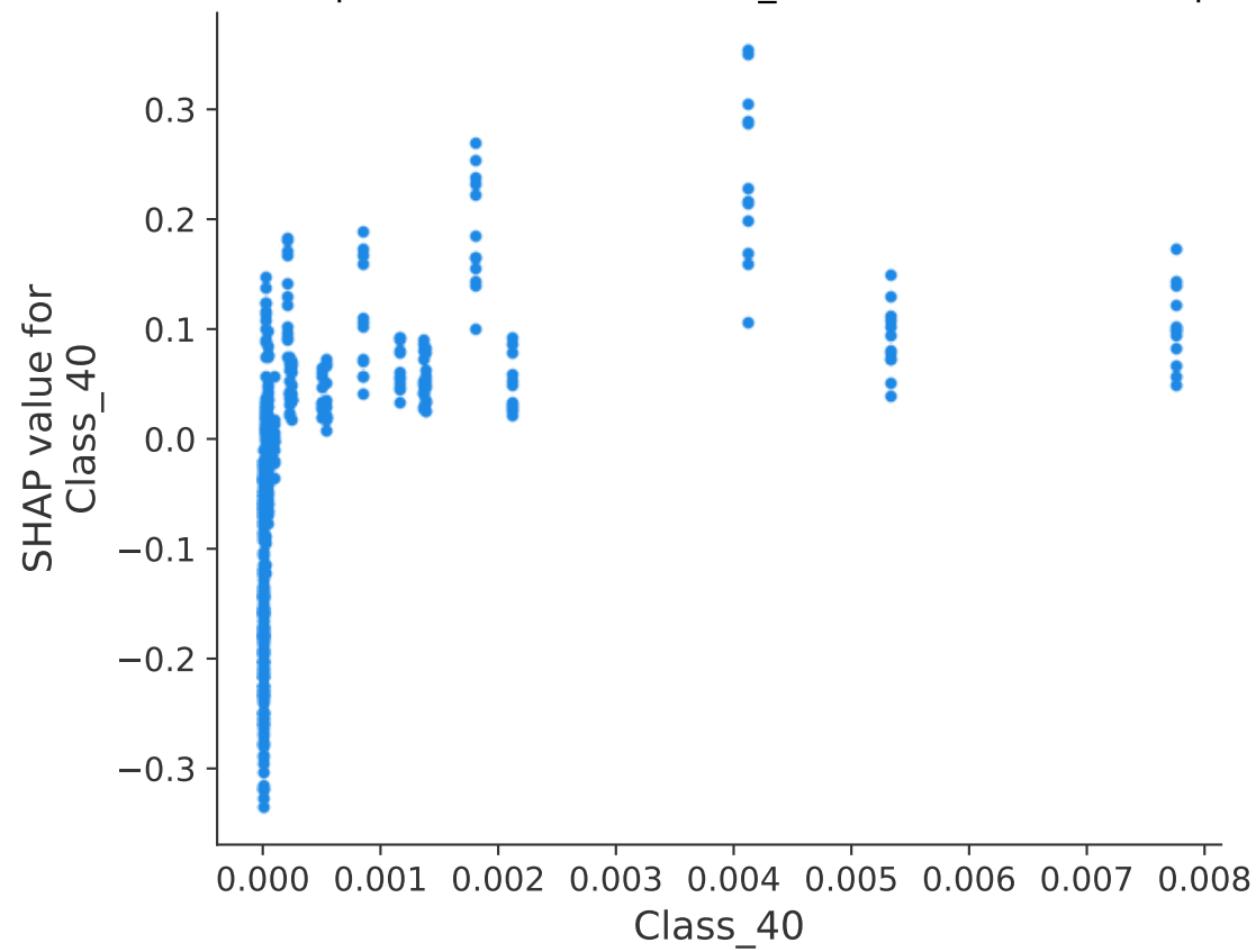


# SHAP Dependence Plot for Class\_40, Class 0 - Maluku-Papua

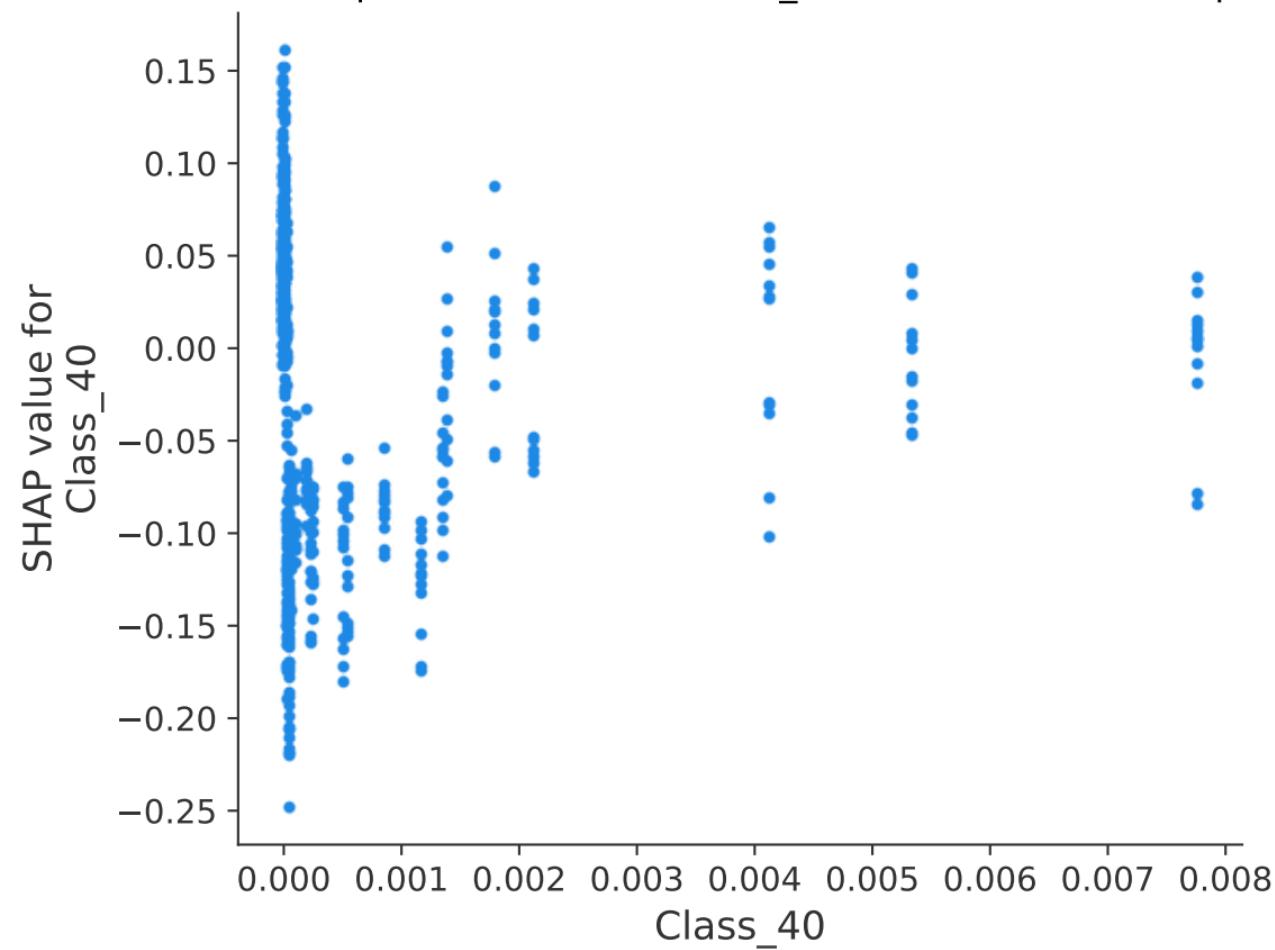
SHAP value for  
Class\_40



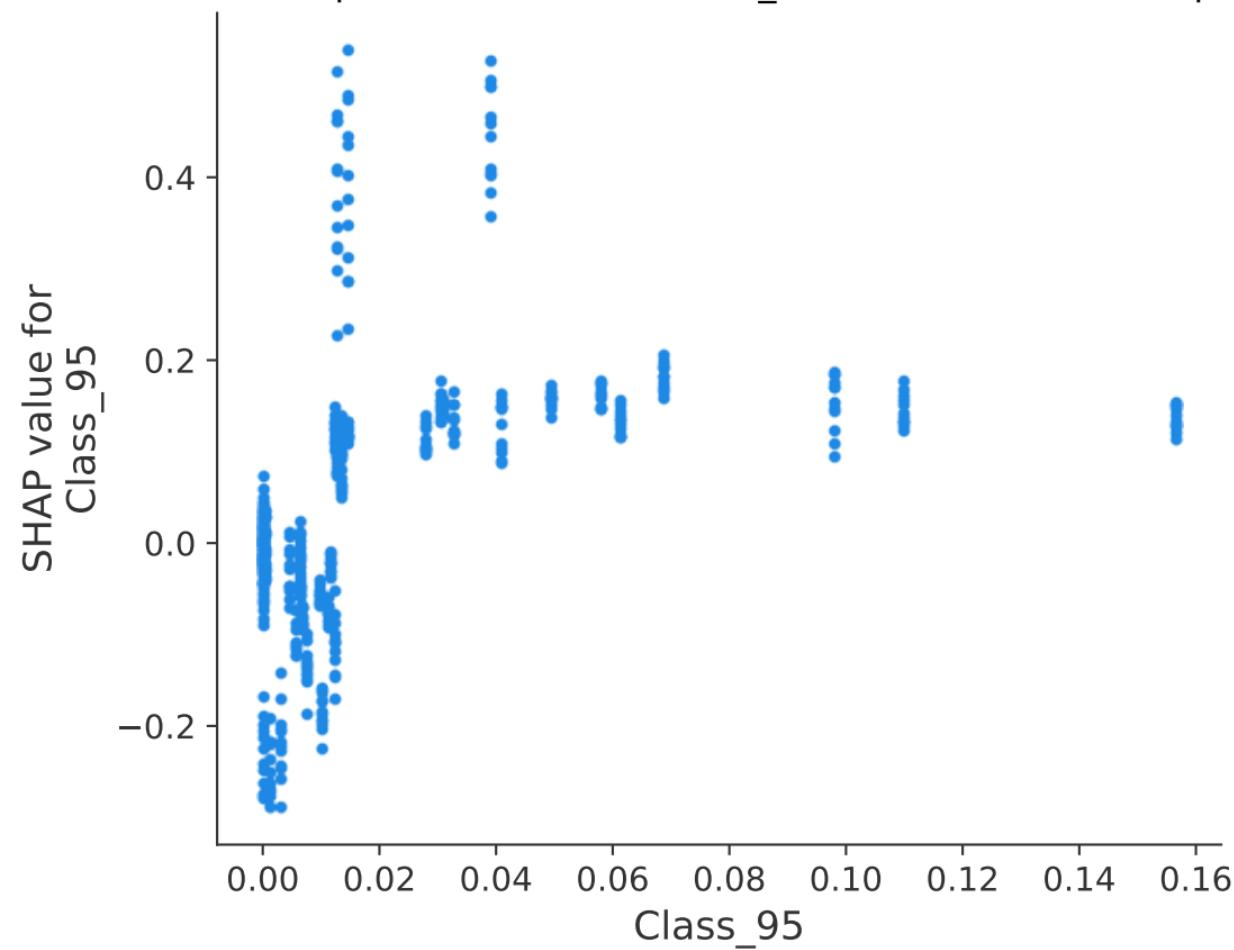
# SHAP Dependence Plot for Class\_40, Class 1 - Maluku-Papua



# SHAP Dependence Plot for Class\_40, Class 2 - Maluku-Papua

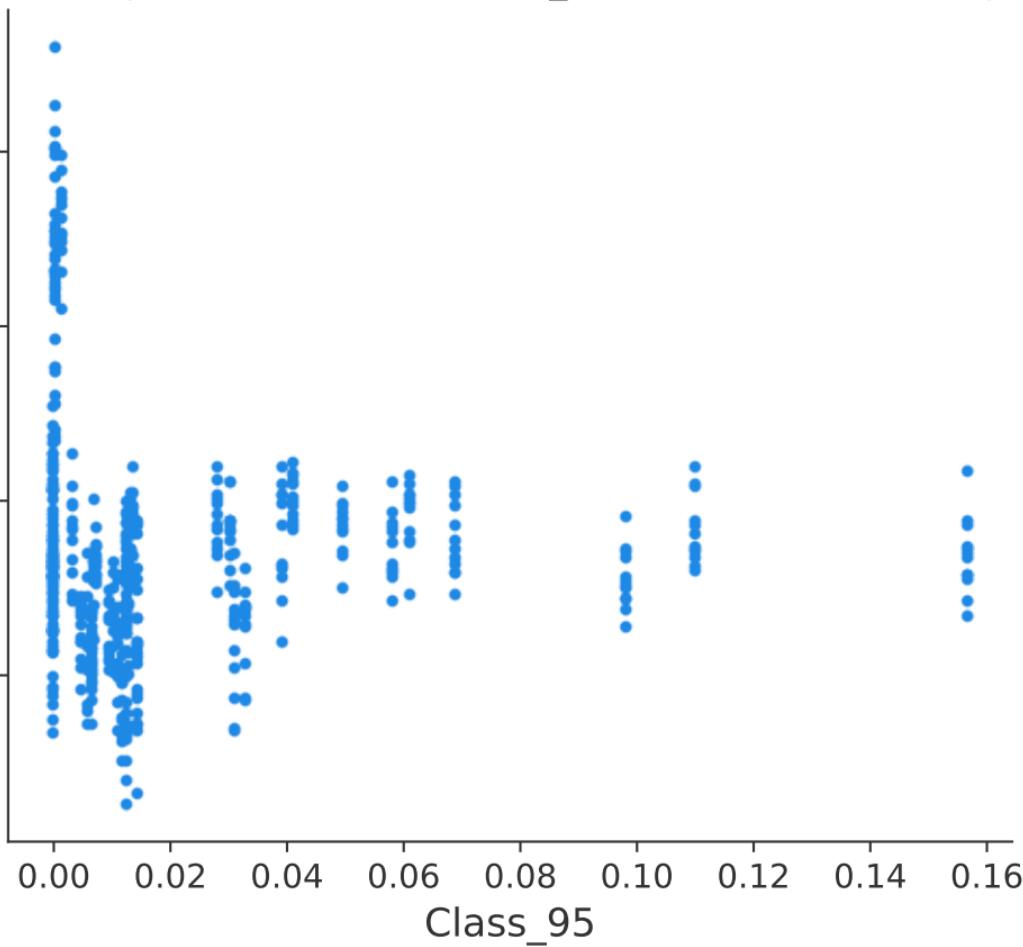


# SHAP Dependence Plot for Class\_95, Class 0 - Maluku-Papua



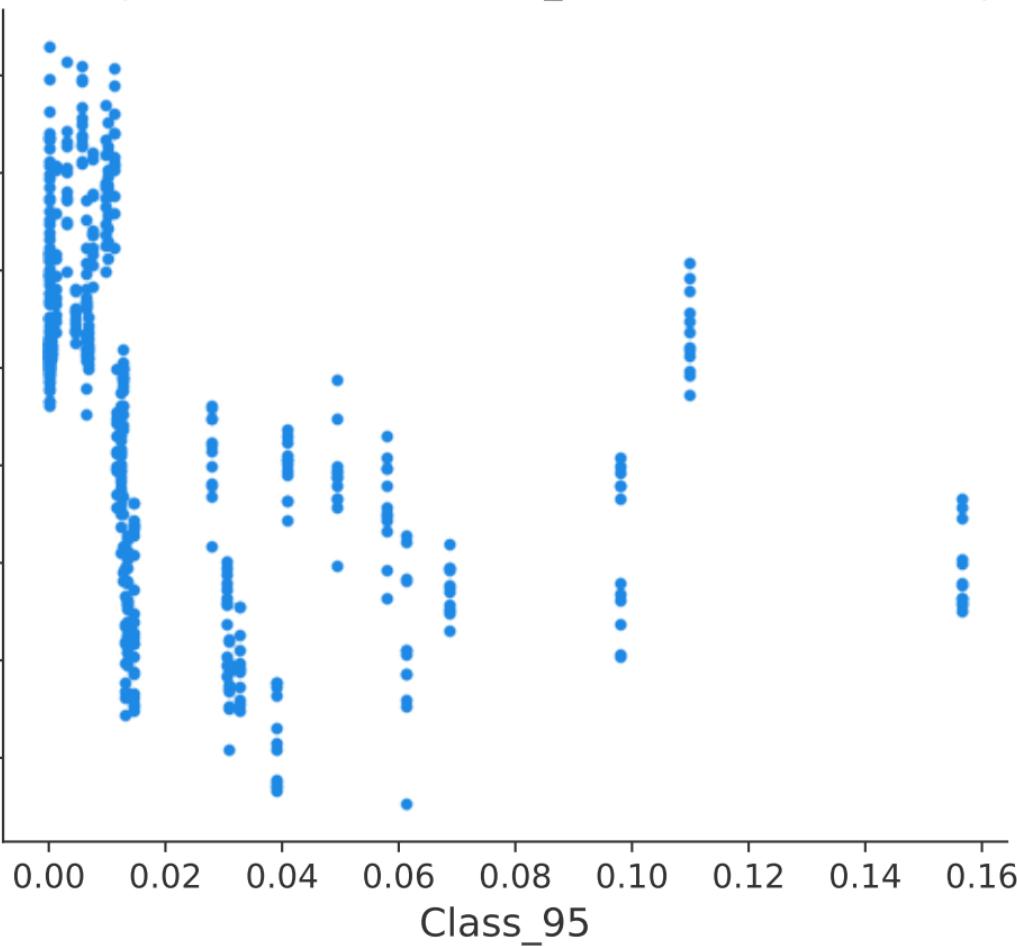
SHAP Dependence Plot for Class\_95, Class 1 - Maluku-Papua

SHAP value for  
Class\_95

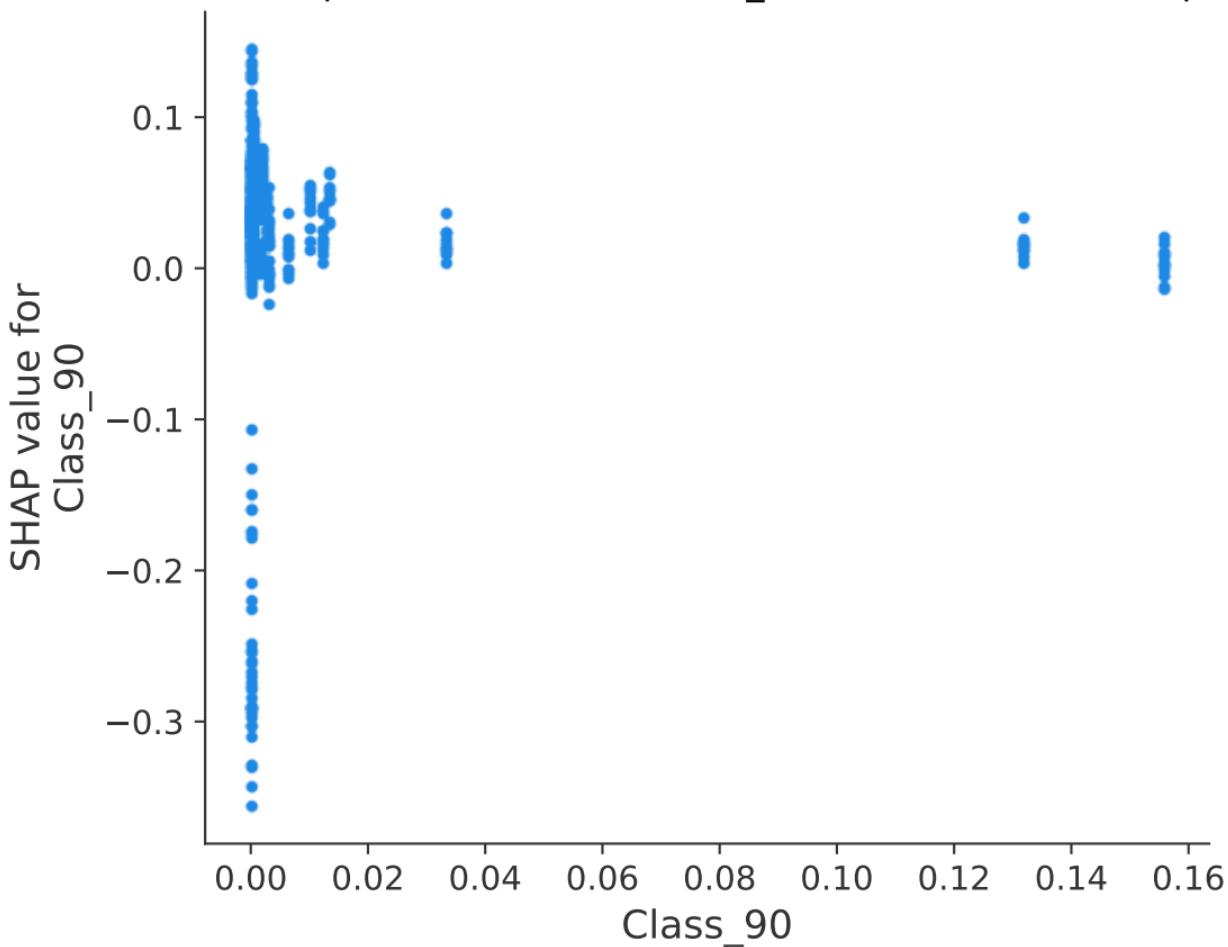


# SHAP Dependence Plot for Class\_95, Class 2 - Maluku-Papua

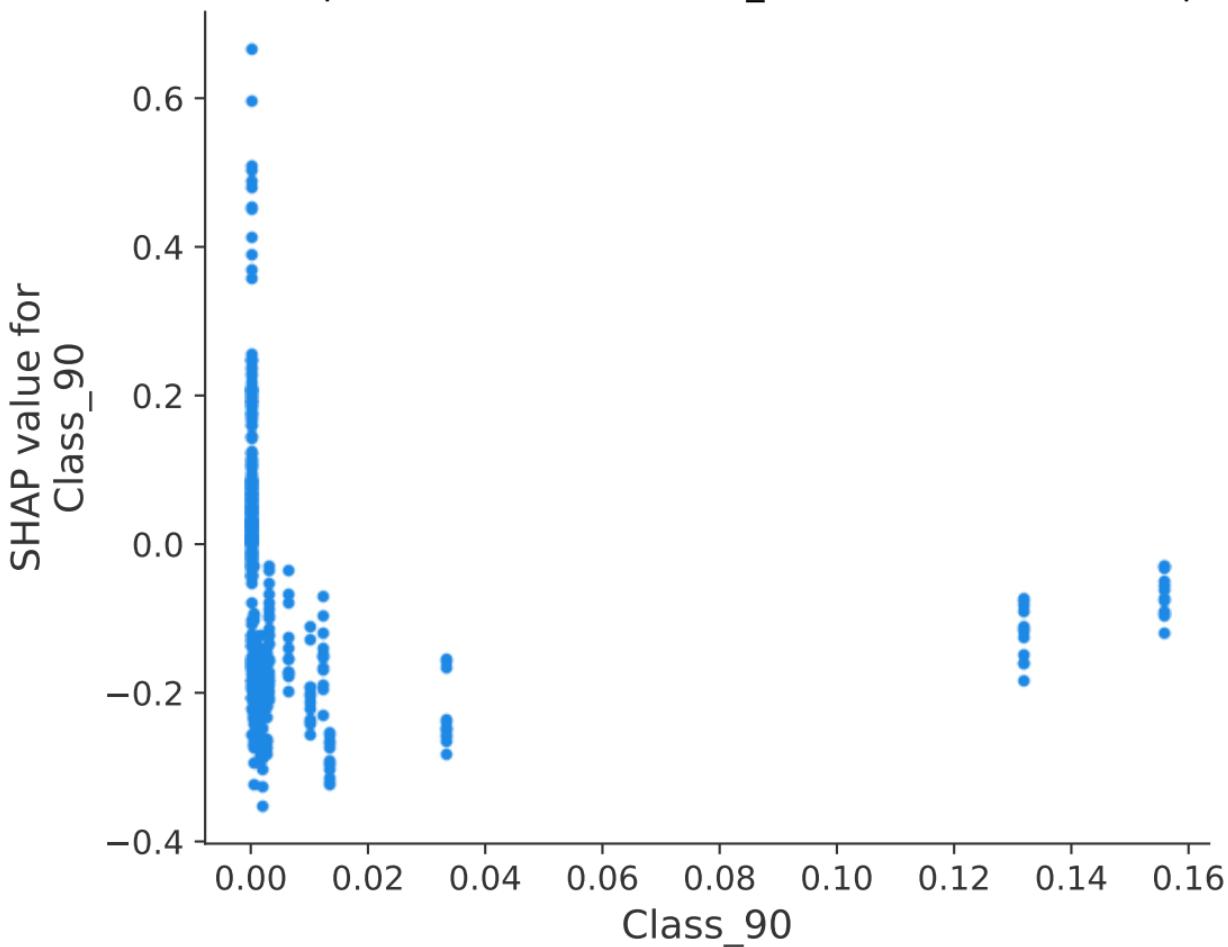
SHAP value for  
Class\_95



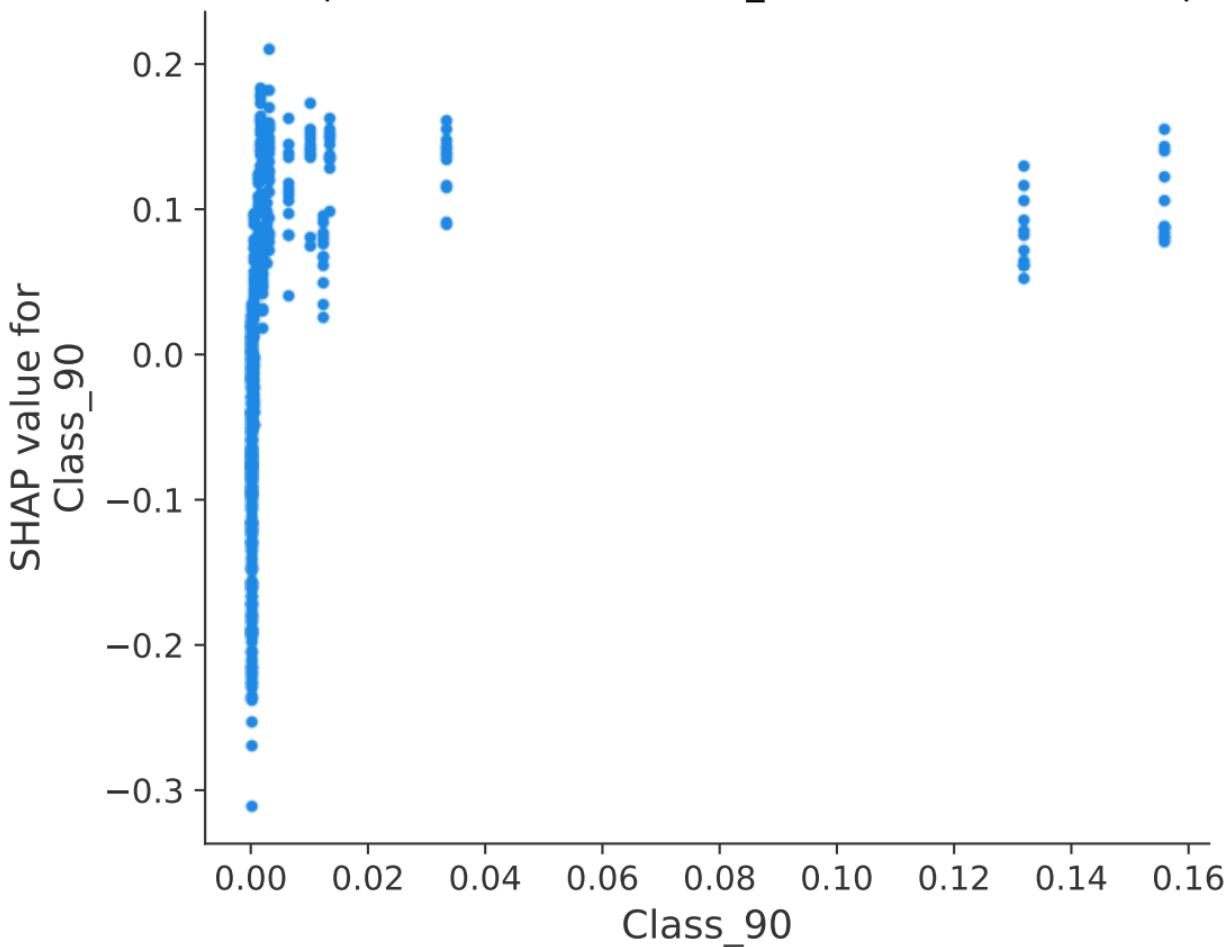
SHAP Dependence Plot for Class\_90, Class 0 - Maluku-Papua



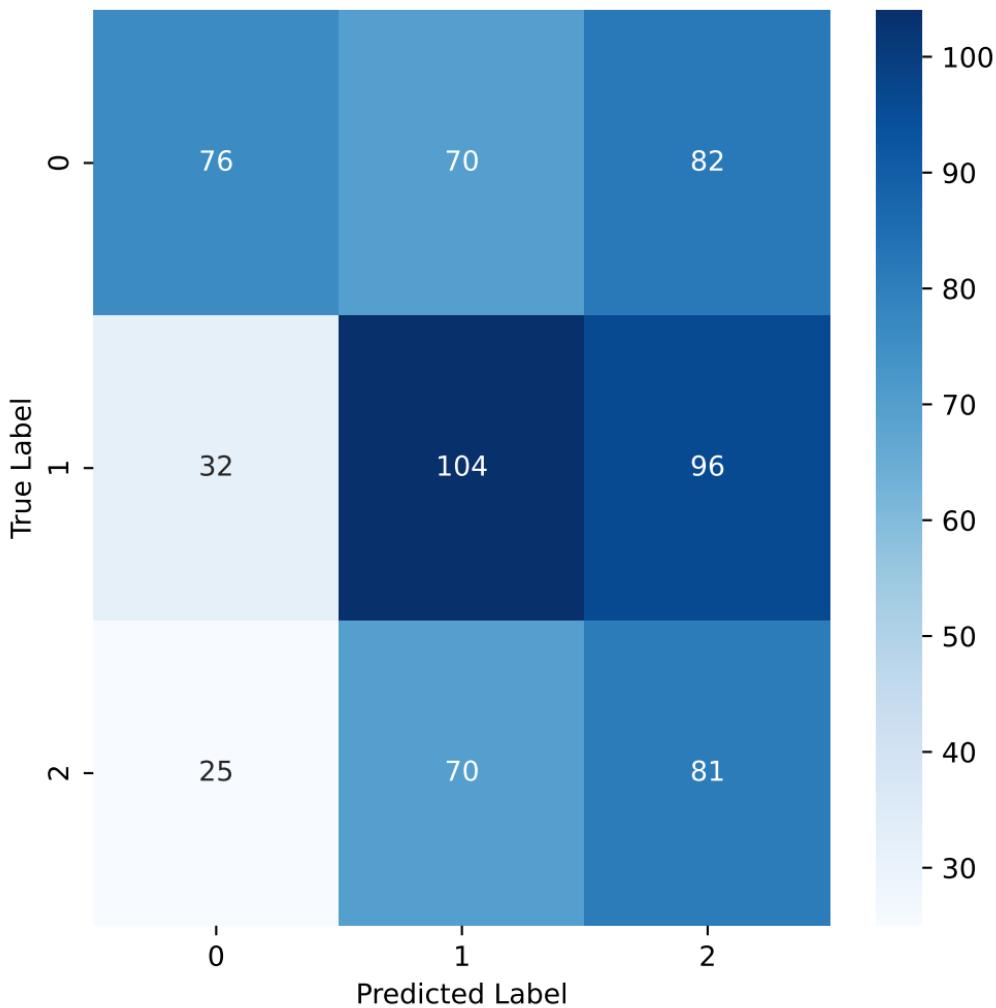
SHAP Dependence Plot for Class\_90, Class 1 - Maluku-Papua



# SHAP Dependence Plot for Class\_90, Class 2 - Maluku-Papua

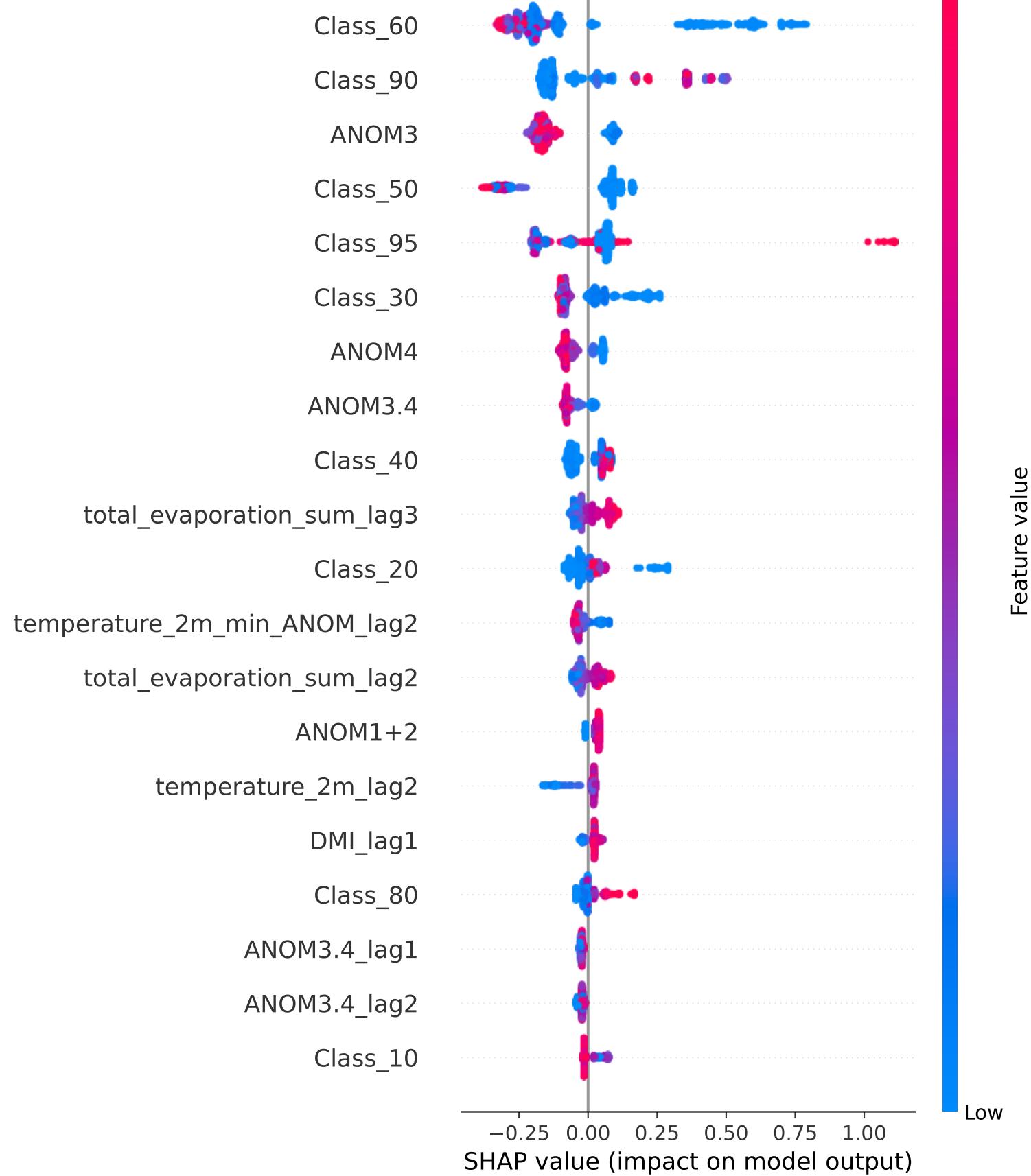


### Confusion Matrix - Kalimantan



SHAP Beeswarm Plot for Class 0 - Kalimantan

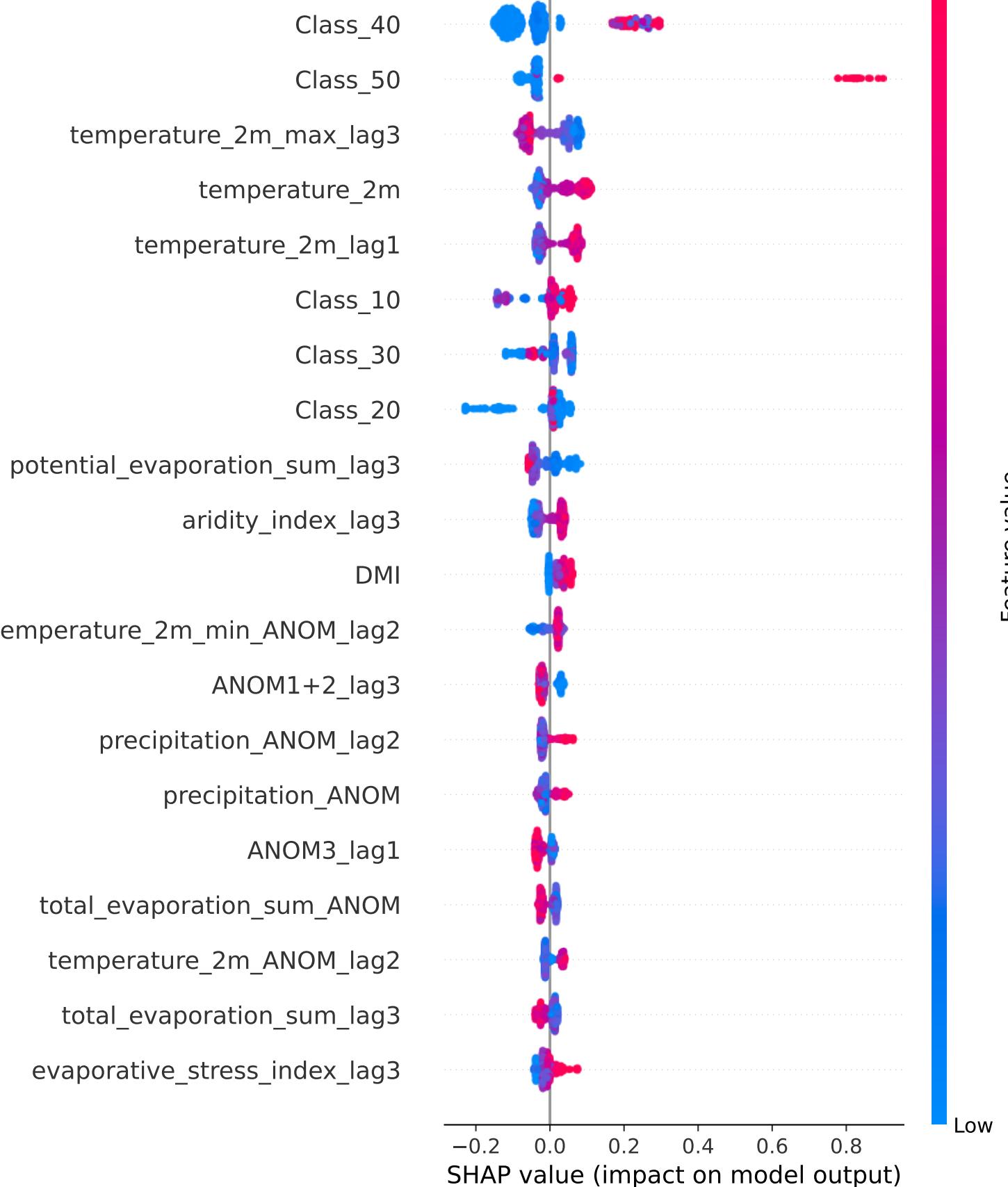
High



Low

SHAP Beeswarm Plot for Class 1 - Kalimantan

High



Low

SHAP Beeswarm Plot for Class 2 - Kalimantan

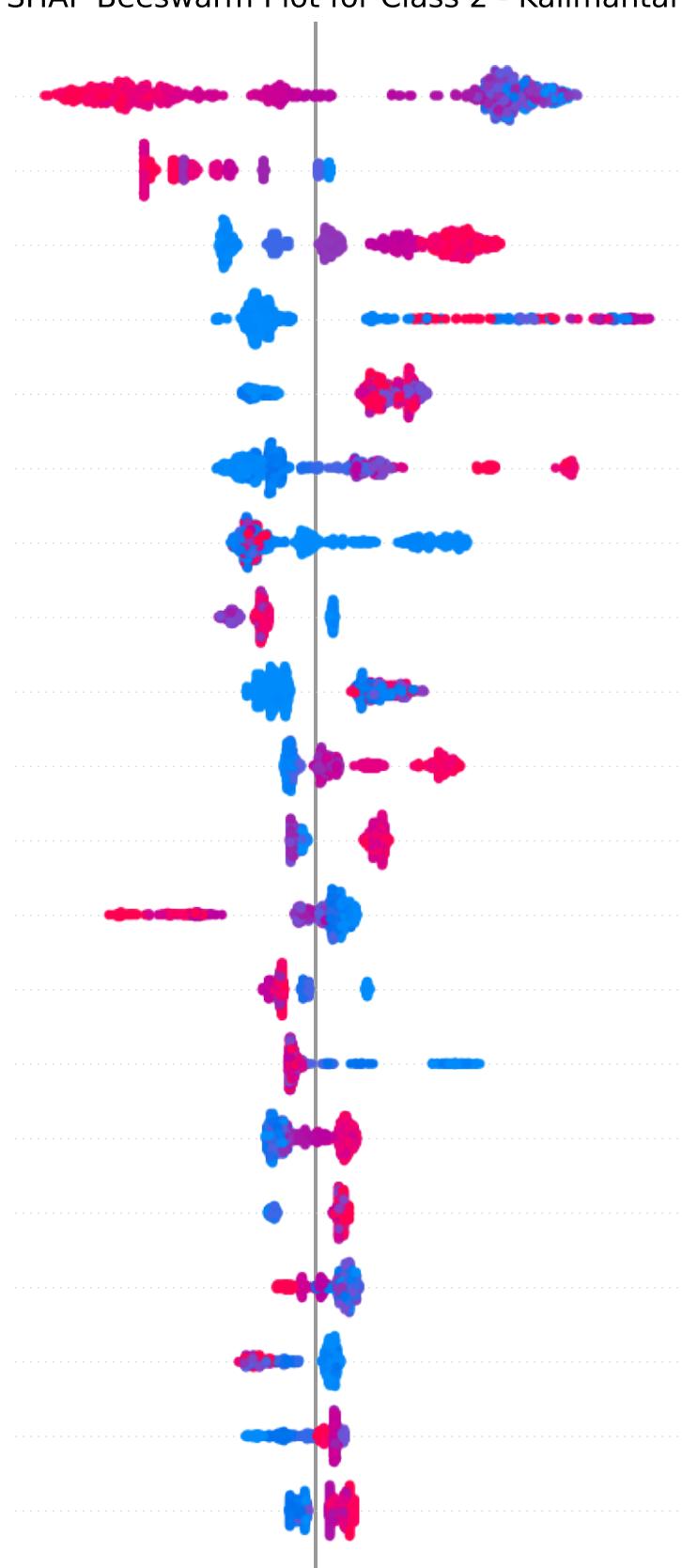
High

Feature value

evaporative\_stress\_index\_lag3  
ANOM1+2  
ANOM4  
Class\_50  
ANOM3  
Class\_60  
Class\_40  
DMI  
Class\_95  
ANOM4\_lag1  
DMI\_lag3  
Class\_80  
DMI\_lag1  
temperature\_2m\_min\_lag3  
precipitation  
ANOM3\_lag1  
DMI\_East\_lag3  
Class\_90  
DMI\_East\_lag2  
ANOM4\_lag2

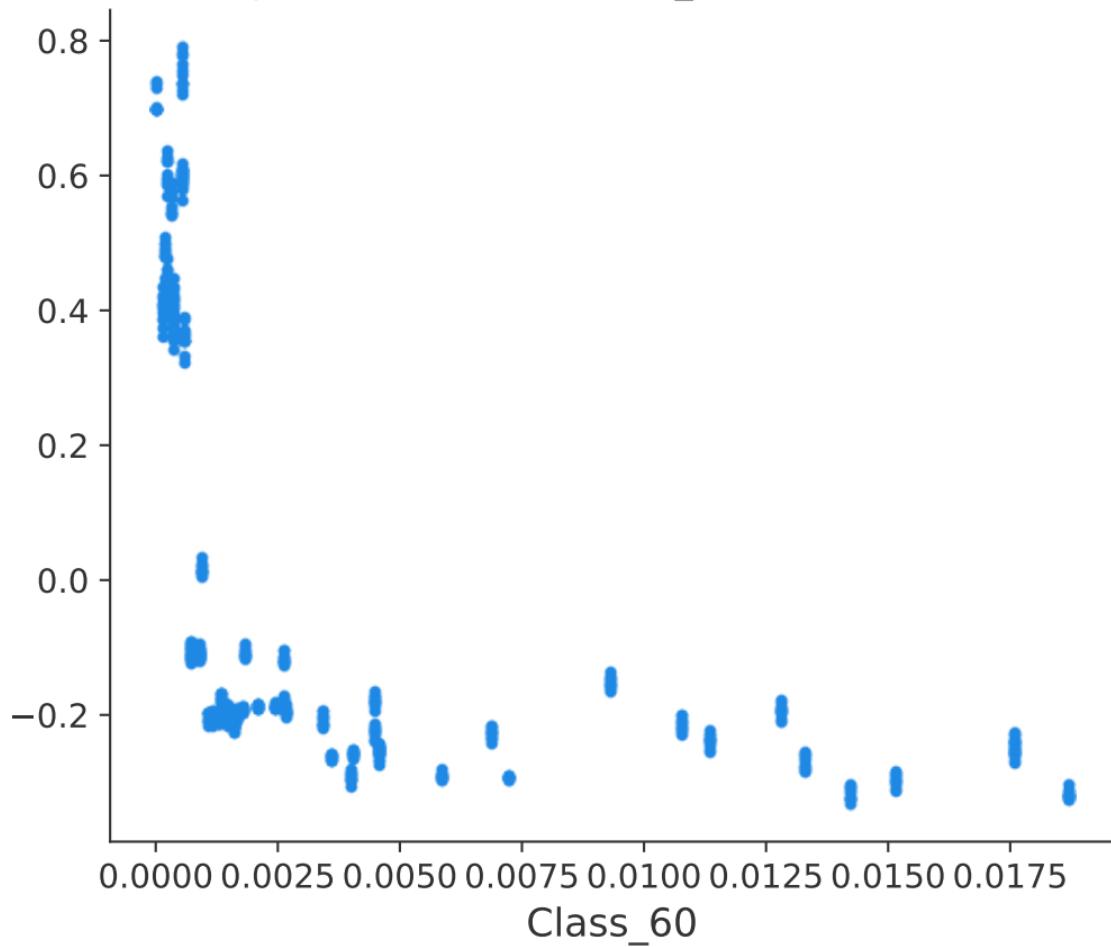
-0.4 -0.2 0.0 0.2 0.4  
SHAP value (impact on model output)

Low

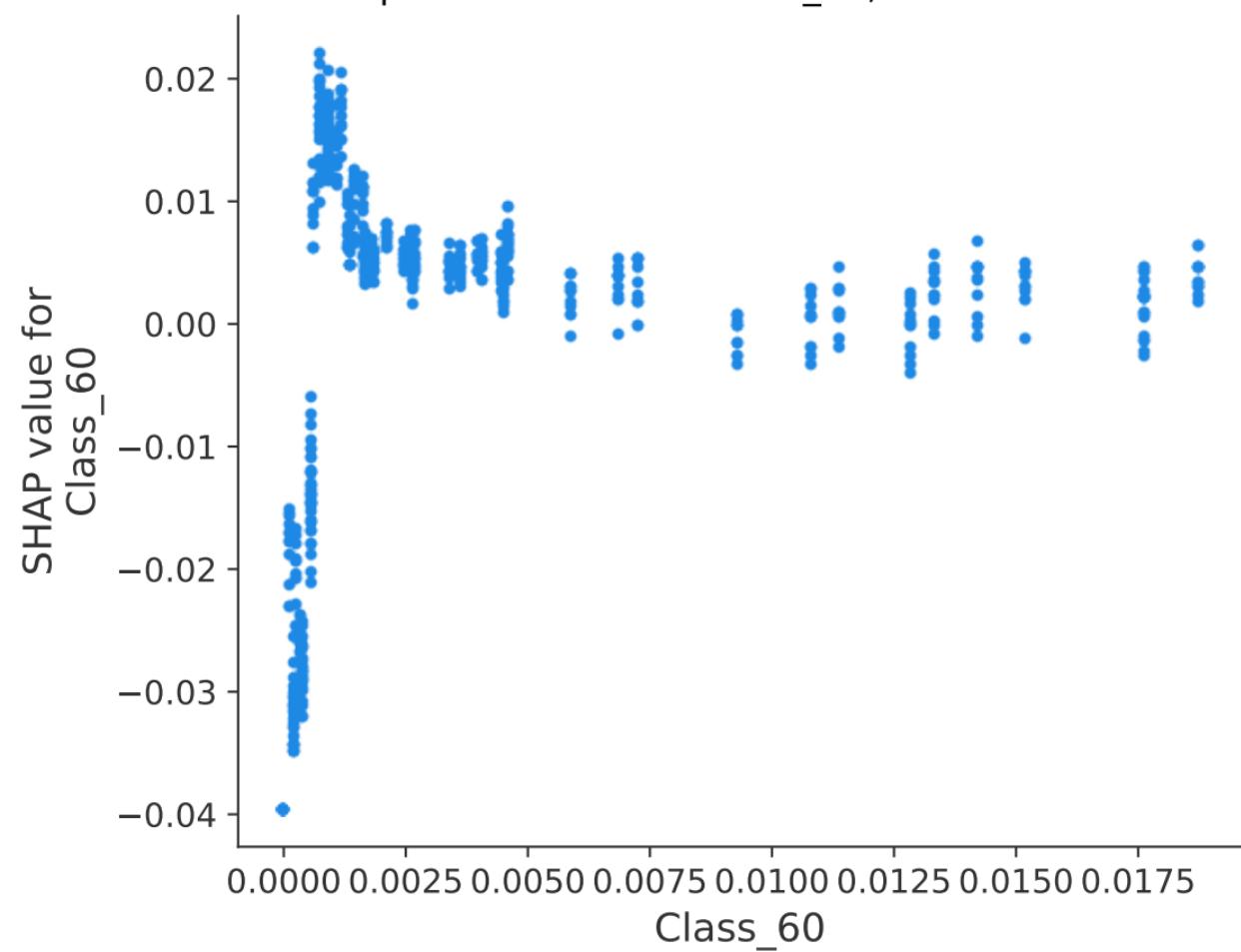


# SHAP Dependence Plot for Class\_60, Class 0 - Kalimantan

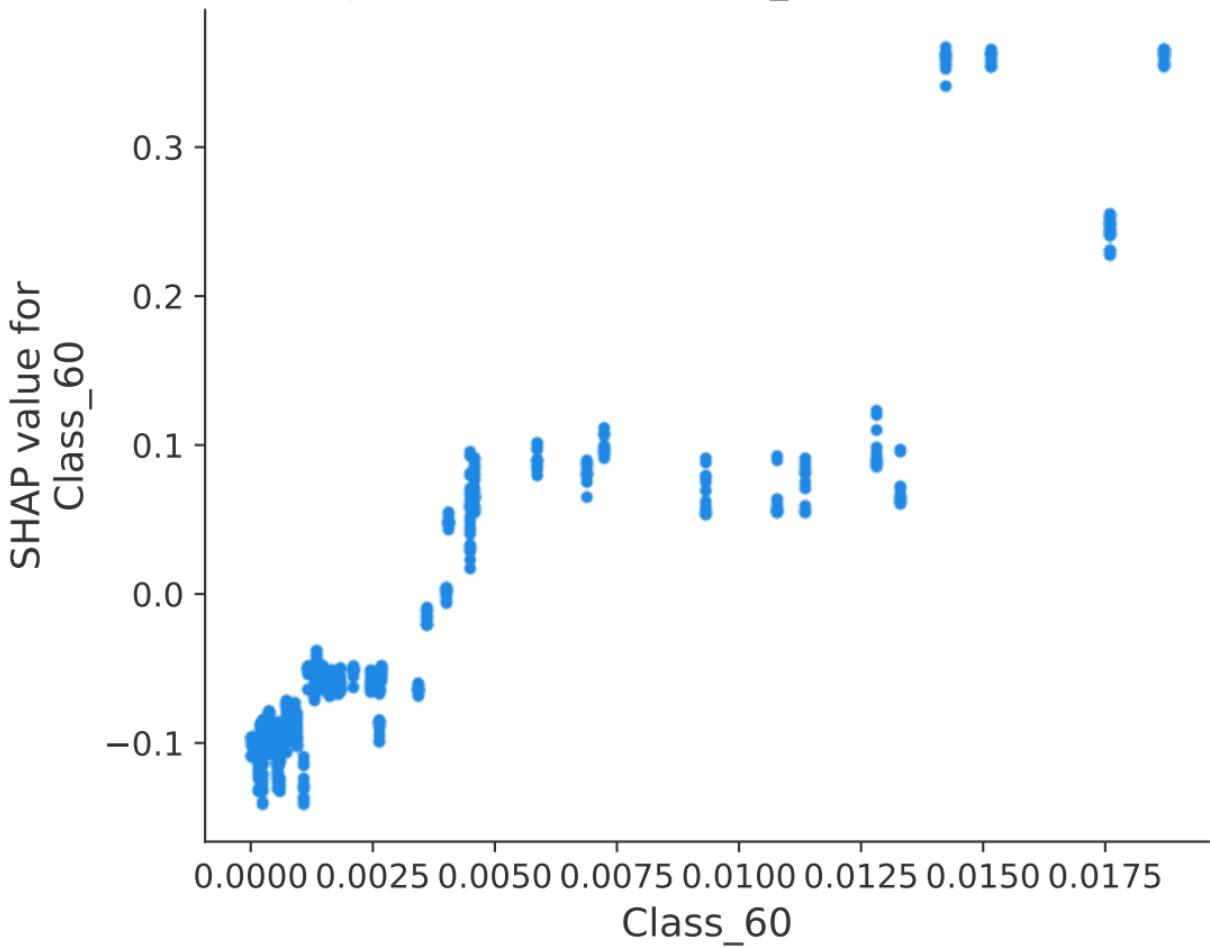
SHAP value for  
Class\_60



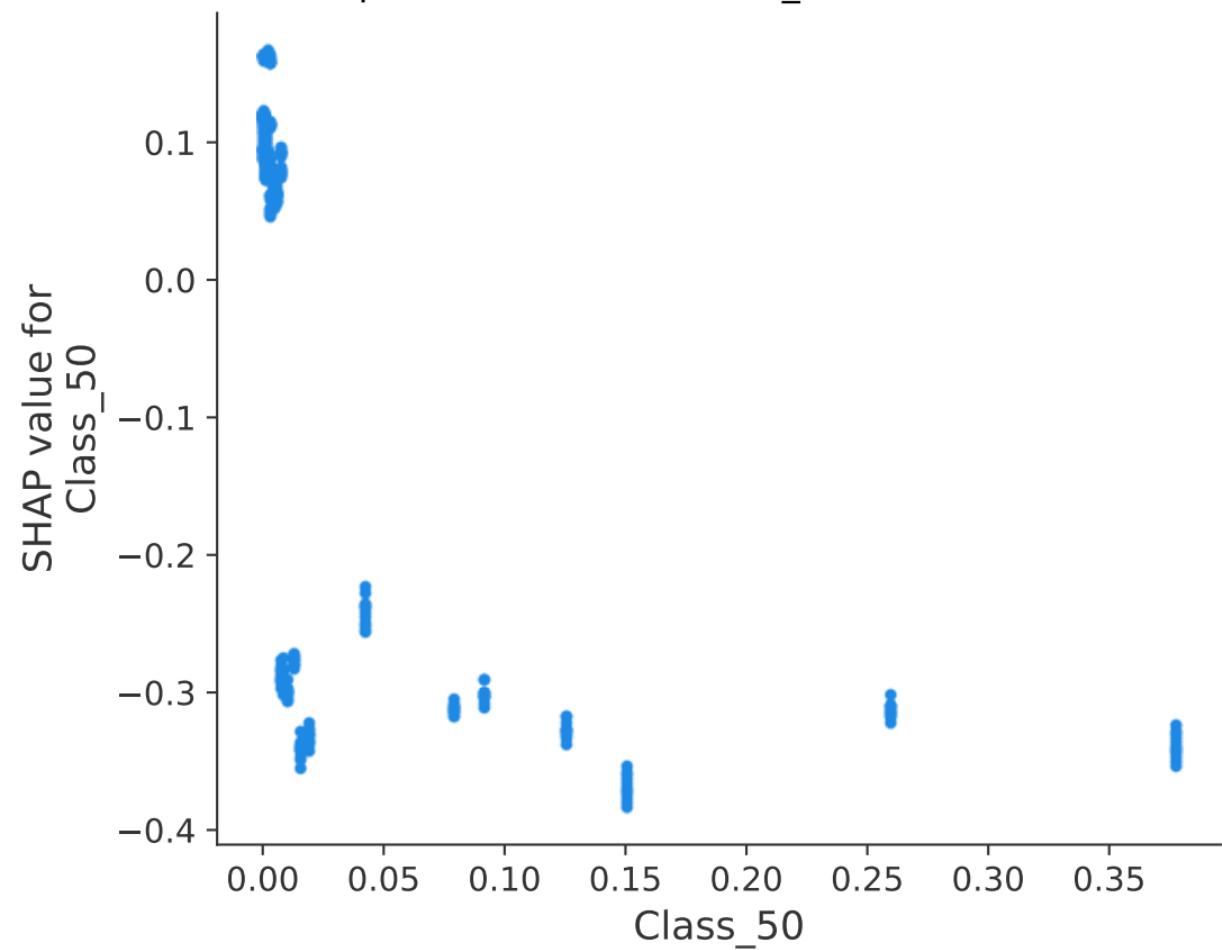
# SHAP Dependence Plot for Class\_60, Class 1 - Kalimantan



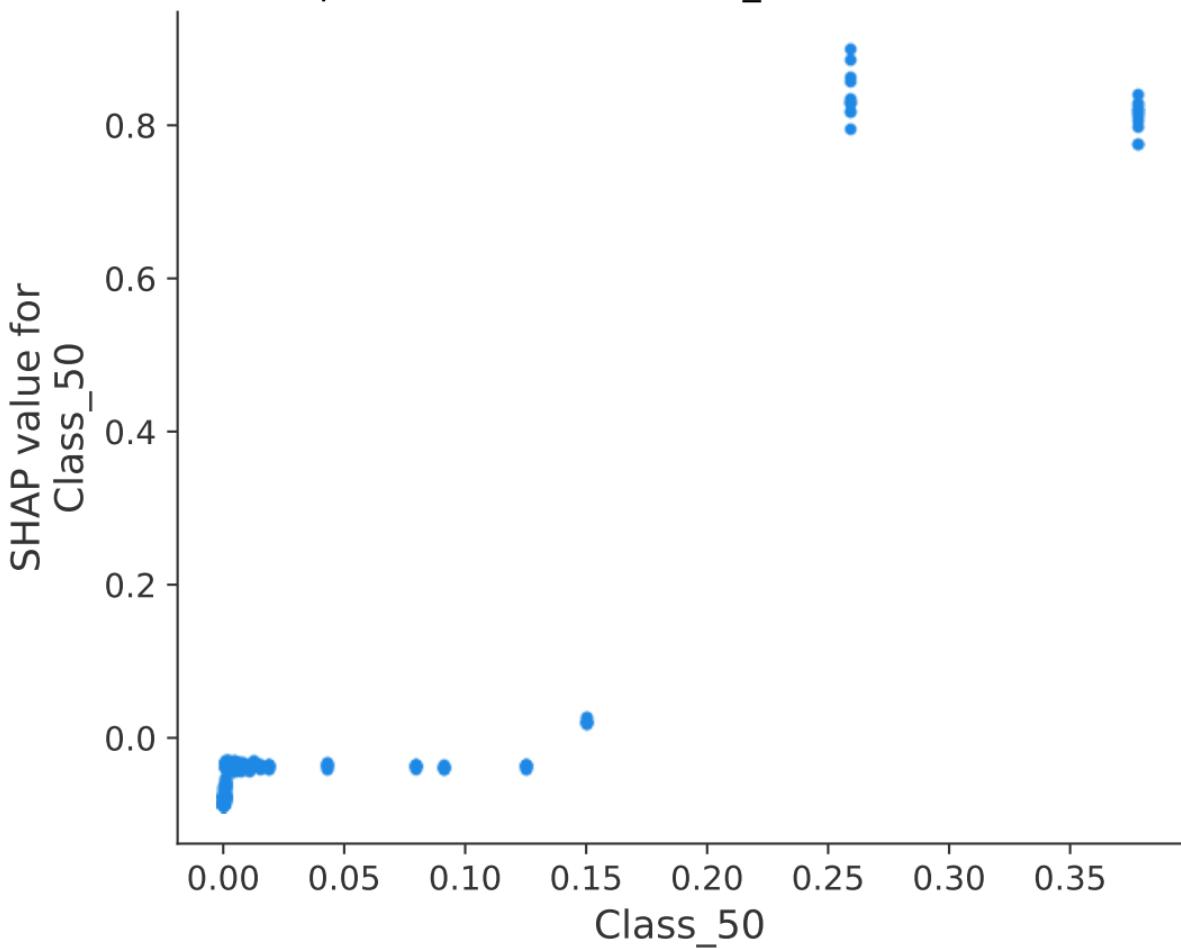
# SHAP Dependence Plot for Class\_60, Class 2 - Kalimantan



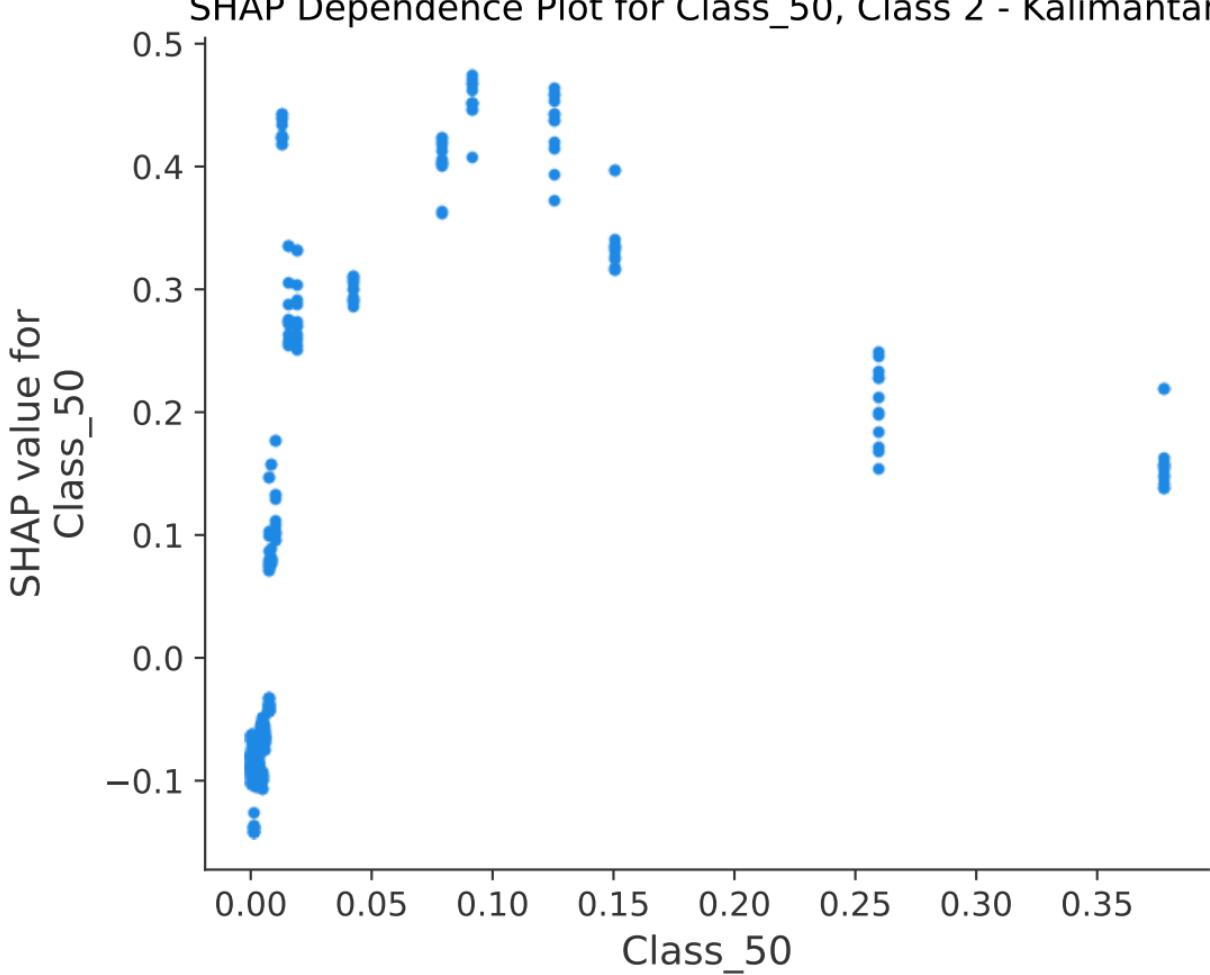
# SHAP Dependence Plot for Class\_50, Class 0 - Kalimantan



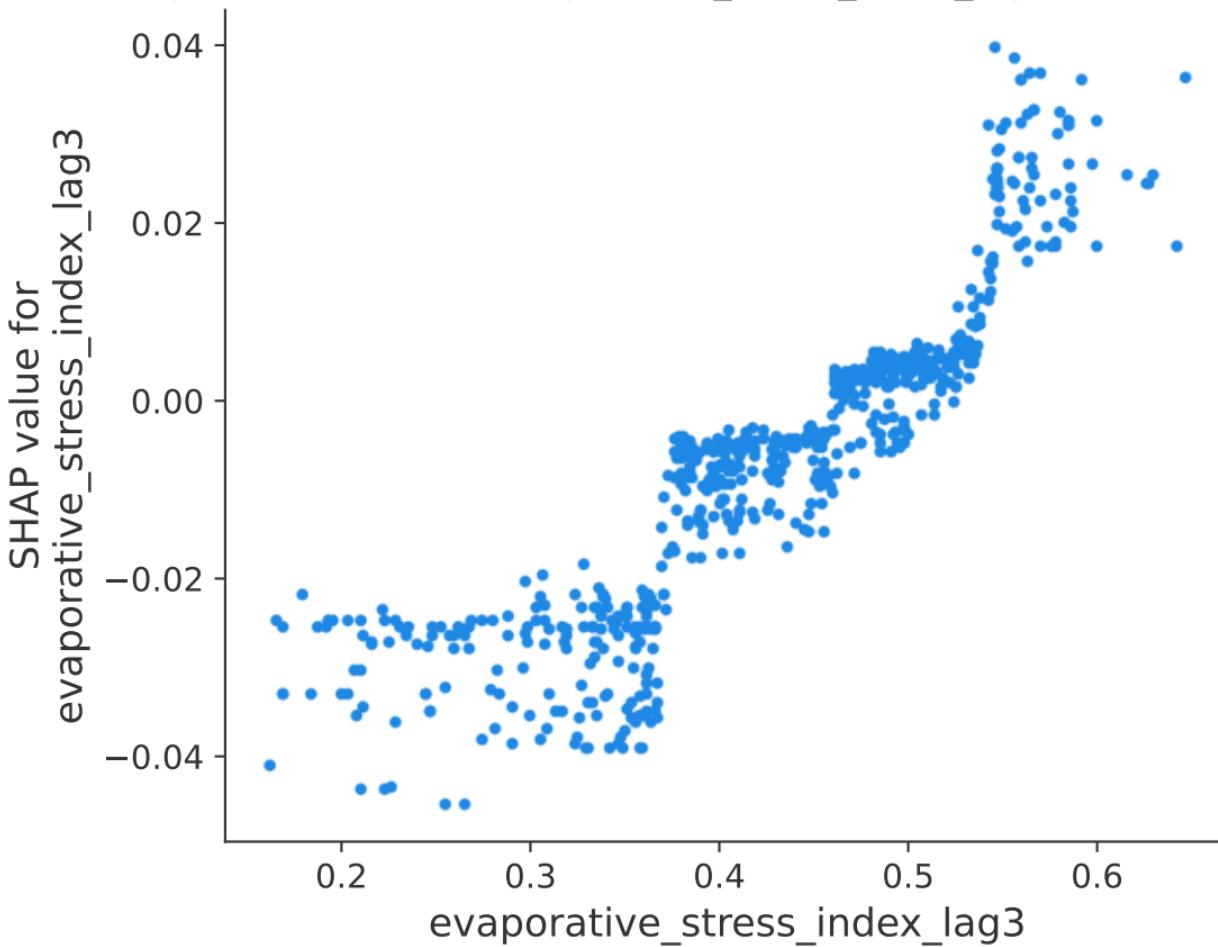
# SHAP Dependence Plot for Class\_50, Class 1 - Kalimantan



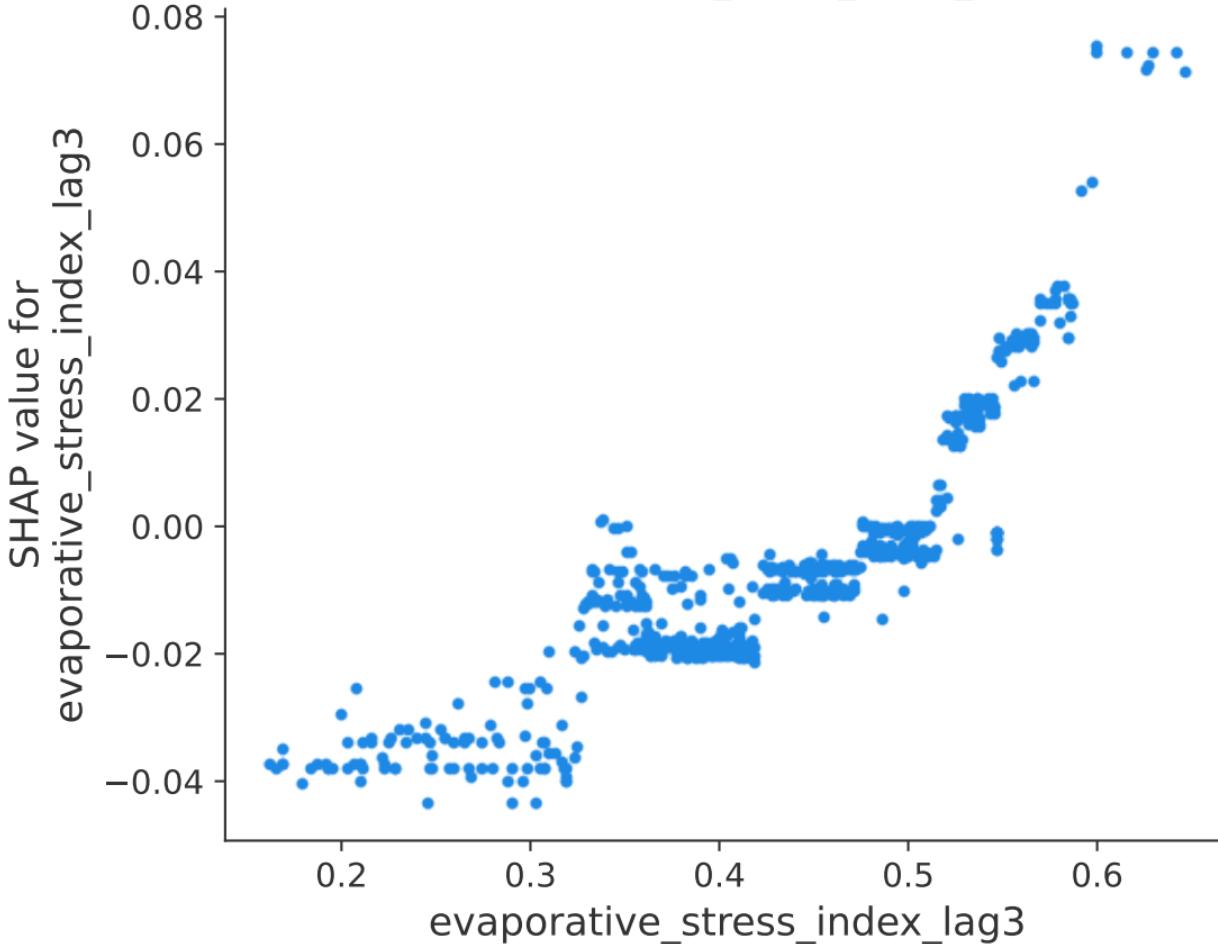
# SHAP Dependence Plot for Class\_50, Class 2 - Kalimantan



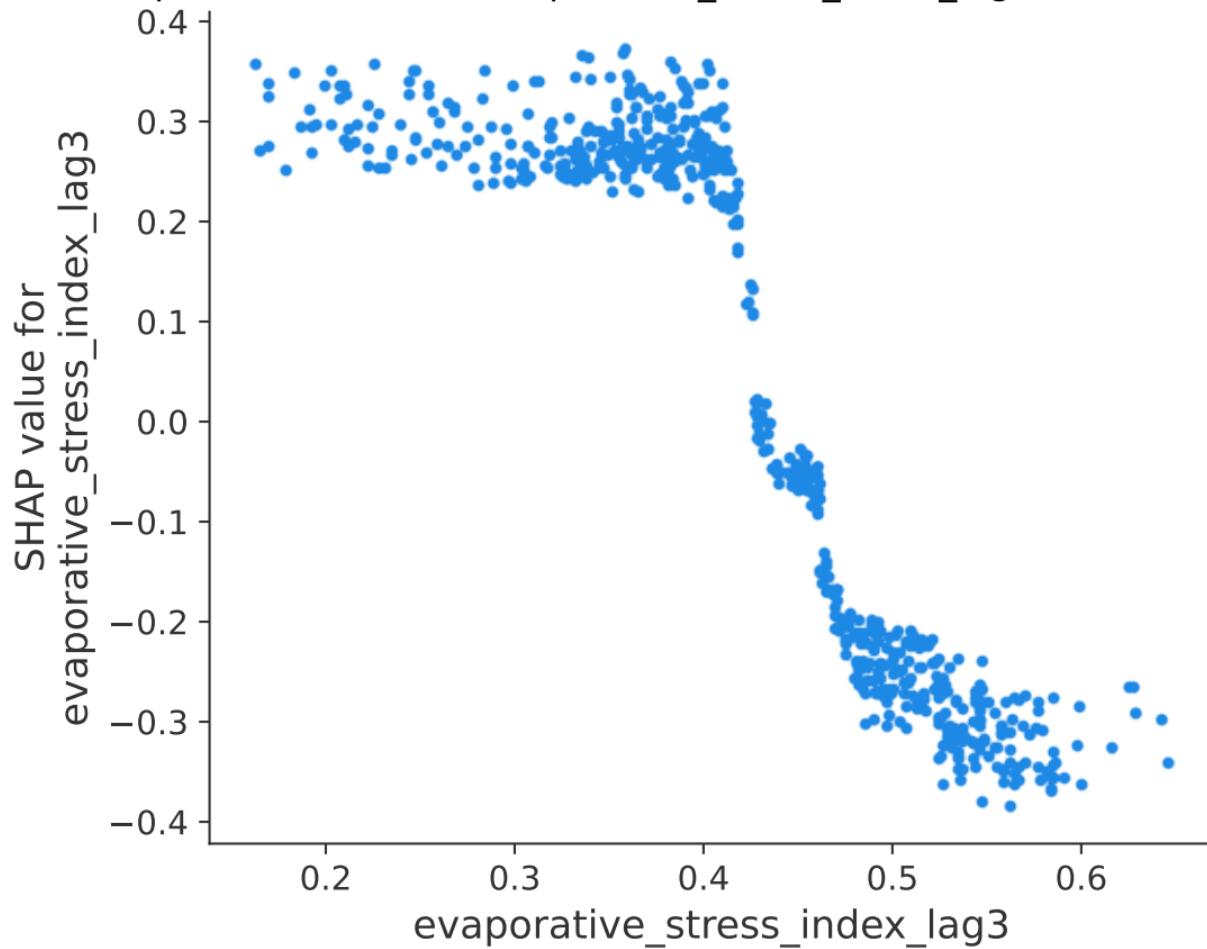
SHAP Dependence Plot for evaporative\_stress\_index\_lag3, Class 0 - Kalimantan



# SHAP Dependence Plot for evaporative\_stress\_index\_lag3, Class 1 - Kalimantan

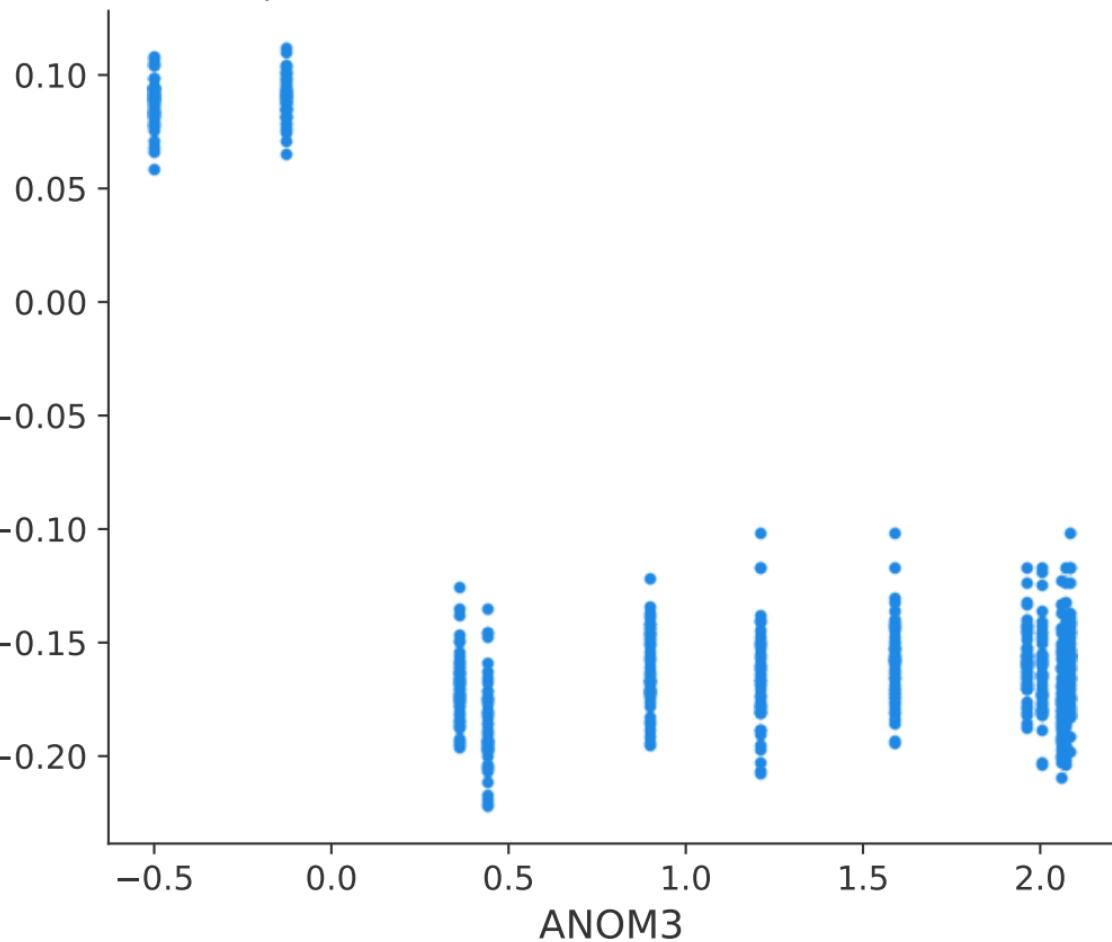


# SHAP Dependence Plot for evaporative\_stress\_index\_lag3, Class 2 - Kalimantan



# SHAP Dependence Plot for ANOM3, Class 0 - Kalimantan

SHAP value for  
ANOM3



# SHAP Dependence Plot for ANOM3, Class 1 - Kalimantan

SHAP value for  
ANOM3

0.010

0.005

0.000

-0.005

-0.010

-0.015

-0.5

0.0

0.5

1.0

1.5

2.0

ANOM3

# SHAP Dependence Plot for ANOM3, Class 2 - Kalimantan

SHAP value for  
ANOM3

0.15

0.10

0.05

0.00

-0.05

-0.10

-0.5

0.0

0.5

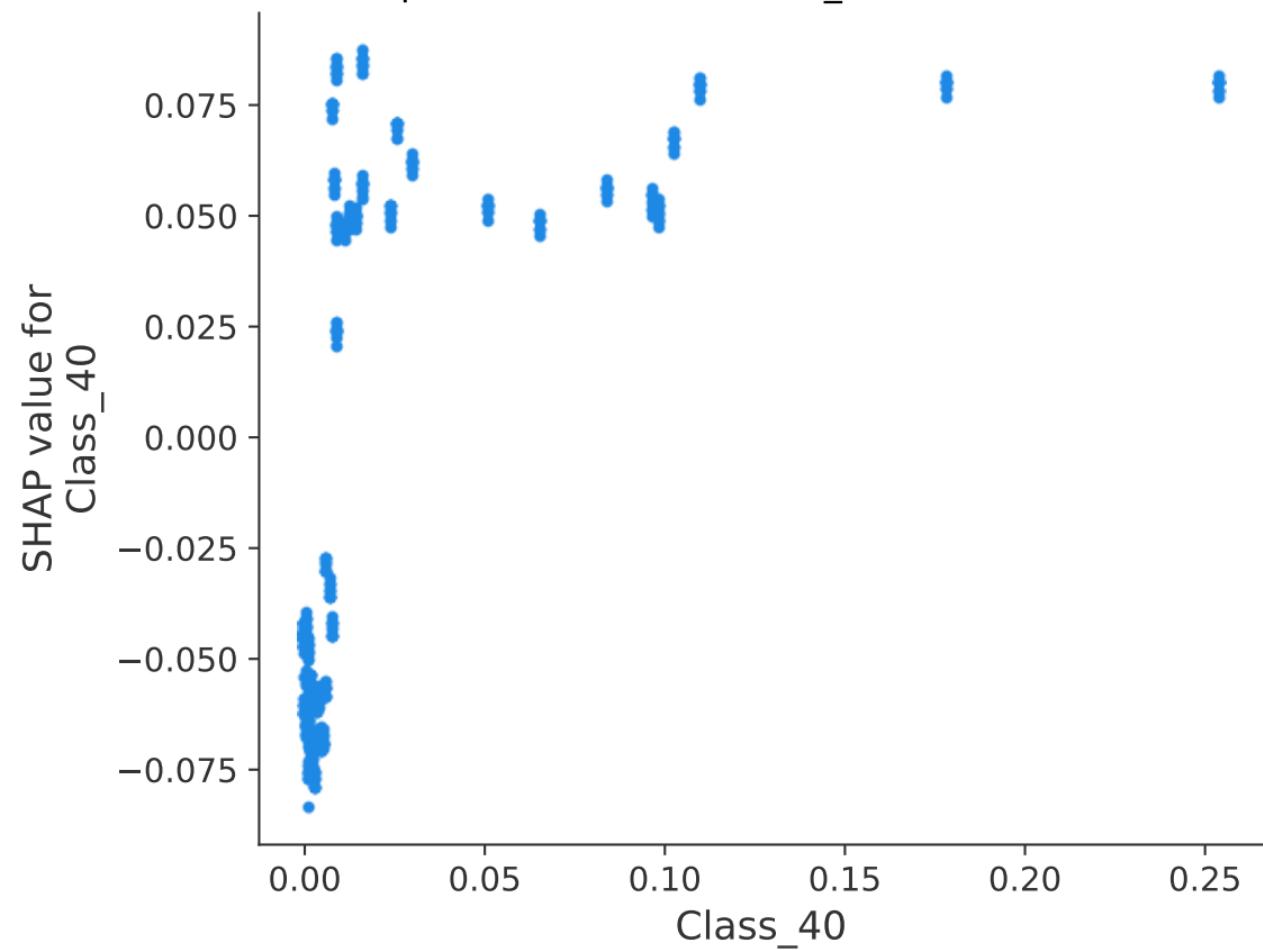
1.0

1.5

2.0

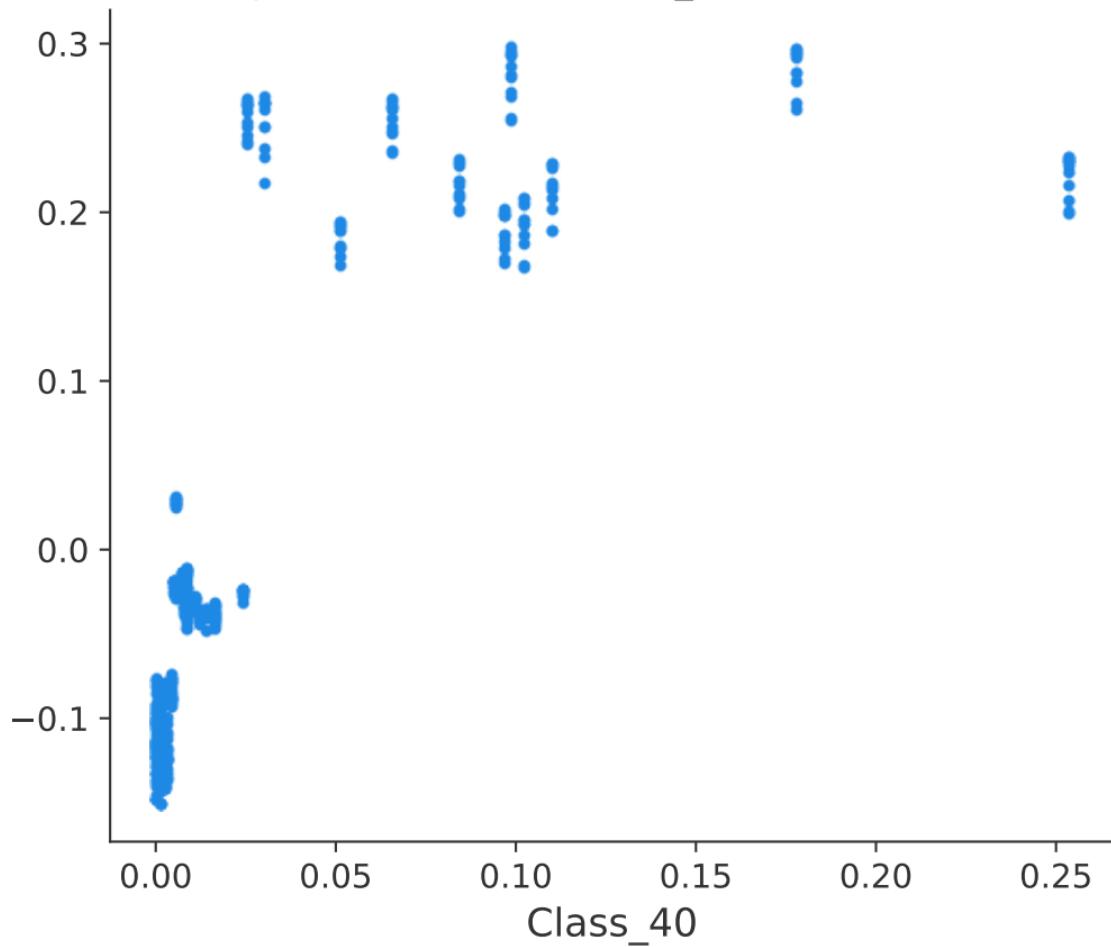
ANOM3

# SHAP Dependence Plot for Class\_40, Class 0 - Kalimantan



# SHAP Dependence Plot for Class\_40, Class 1 - Kalimantan

SHAP value for  
Class\_40



# SHAP Dependence Plot for Class\_40, Class 2 - Kalimantan

SHAP value for  
Class\_40

0.20

0.15

0.10

0.05

0.00

-0.05

-0.10

0.00

0.05

0.10

0.15

0.20

0.25

Class\_40