Outputs inspection half CIFAR100

```
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 4.0.5
```

```
library(dplyr)
```

```
## Warning: package 'dplyr' was built under R version 4.0.5
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(tidyr)
```

```
## Warning: package 'tidyr' was built under R version 4.0.5
```

```
library("ggpubr")
```

```
## Warning: package 'ggpubr' was built under R version 4.0.5
```

```
library(LDATS)
```

```
## Warning: package 'LDATS' was built under R version 4.0.5
```

```
library(stringr)

source("utils.R")
```

```
## Warning: package 'hash' was built under R version 4.0.5
```

```
## hash-2.2.6.1 provided by Decision Patterns
```

```
## Warning: package 'reticulate' was built under R version 4.0.5
```

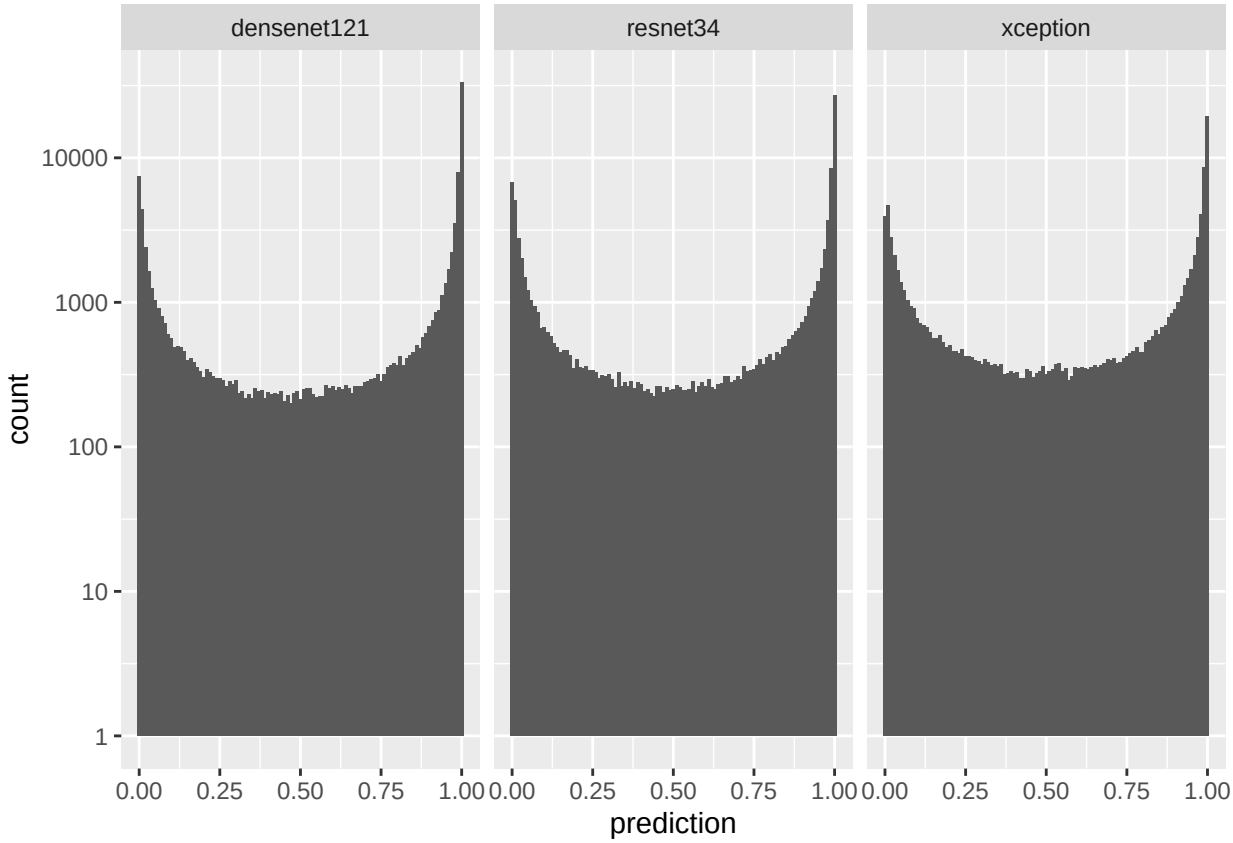
```
## Warning: package 'berryFunctions' was built under R version 4.0.5

##
## Attaching package: 'berryFunctions'

## The following object is masked from 'package:dplyr':
##
##     between

## Warning: package 'purrr' was built under R version 4.0.3

## Warning: package 'reshape2' was built under R version 4.0.3

##
## Attaching package: 'reshape2'

## The following object is masked from 'package:tidyr':
##
##     smiths
```

Visualization on CIFAR100. We are using data of three neural networks trained on reduced CIFAR100 training set. Half of the CIFAR100 training set was extracted as a validation set. We then divided both the reduced training set and validation set into 5 disjoint subsets and trained an ensemble on each of them. This was done in 10 replications, each time with ransom split of the training set into validation and new training set. In this visualization, we are trying to inspect the outputs deeper, mainly to make sense of strange behavior of nll metric for ensemble outputs.

```
base_dir <- "../data/data_train_val_half_c100"
repls <- 0:9
folds <- 0:4
classes <- 100

nets_outputs <- load_network_outputs(base_dir, repls)
ens_outputs <- load_ensemble_outputs(base_dir, repls, folds)
net_results <- read.csv(file.path(base_dir, "net_accuracies.csv"))
ens_results <- read.csv(file.path(base_dir, "ensemble_accuracies.csv"))
```

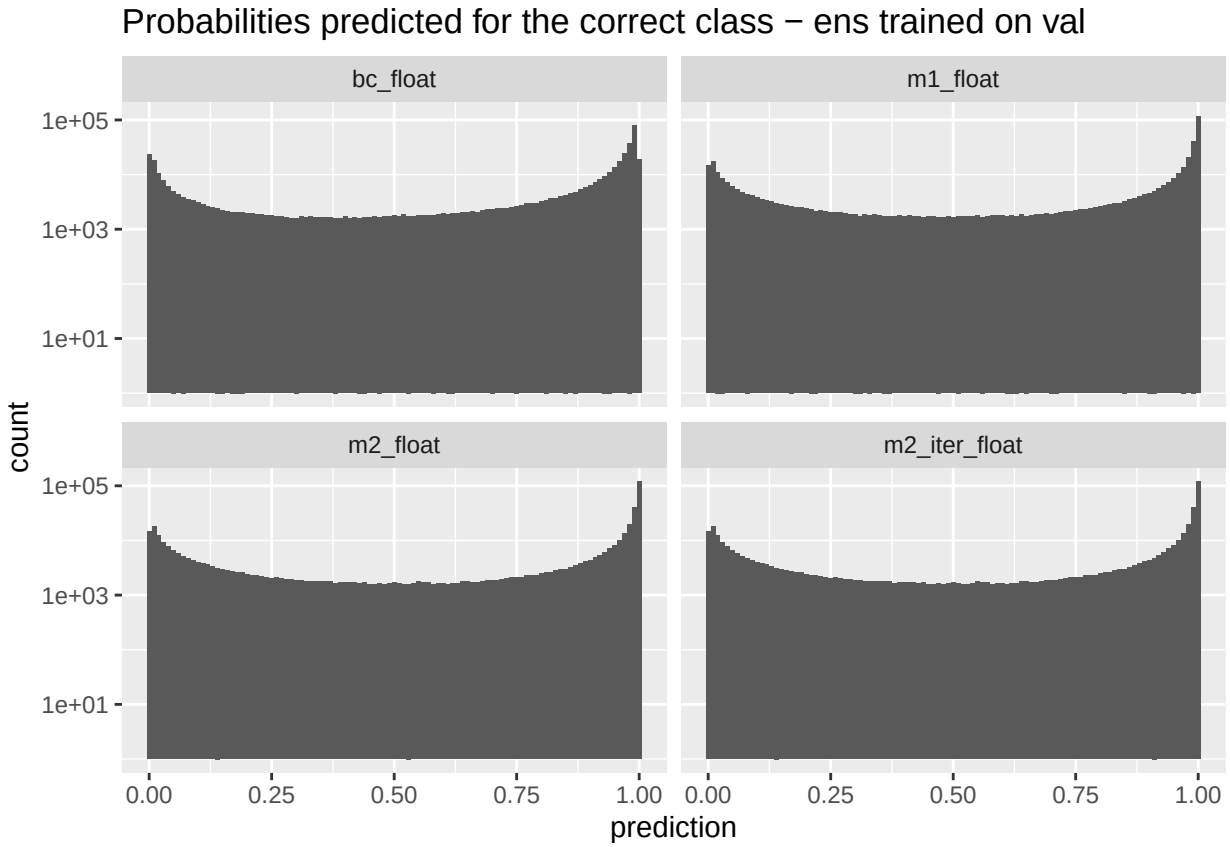
```
preds <- nets_outputs$test_outputs
for (ri in repls + 1)
{
  for (net_i in seq_along(nets_outputs[["networks"]]))
  {
    preds[ri, net_i, ,] <- softmax(preds[ri, net_i, , ])
  }
}
nets_test_cor_probs <- gather(preds, 1 + nets_outputs$test_labels[1, ], 3, 4)
nets_test_cor_probs <- melt(nets_test_cor_probs)
nets_test_cor_probs <- nets_test_cor_probs[, c(-3, -4)]
names(nets_test_cor_probs) <- c("replication", "network", "prediction")
nets_test_cor_probs$network <- as.factor(nets_test_cor_probs$network)
levels(nets_test_cor_probs$network) <- nets_outputs$networks
```

```
nets_cor_preds_histo <- ggplot(data=nets_test_cor_probs) + geom_histogram(mapping=aes(x=prediction), bi
nets_cor_preds_histo
```




```
val_ens_cor_probs <- gather(ens_outputs$val_training, 1 + nets_outputs$test_labels[1, ], 4, 5)
val_ens_cor_probs <- melt(val_ens_cor_probs)
val_ens_cor_probs <- val_ens_cor_probs[, c(-4, -5)]
names(val_ens_cor_probs) <- c("replication", "method", "fold", "prediction")
val_ens_cor_probs$method <- as.factor(val_ens_cor_probs$method)
levels(val_ens_cor_probs$method) <- ens_outputs$methods
```

```
val_ens_cor_preds_histo <- ggplot(data=val_ens_cor_probs) + geom_histogram(mapping=aes(x=prediction), b
val_ens_cor_preds_histo
```

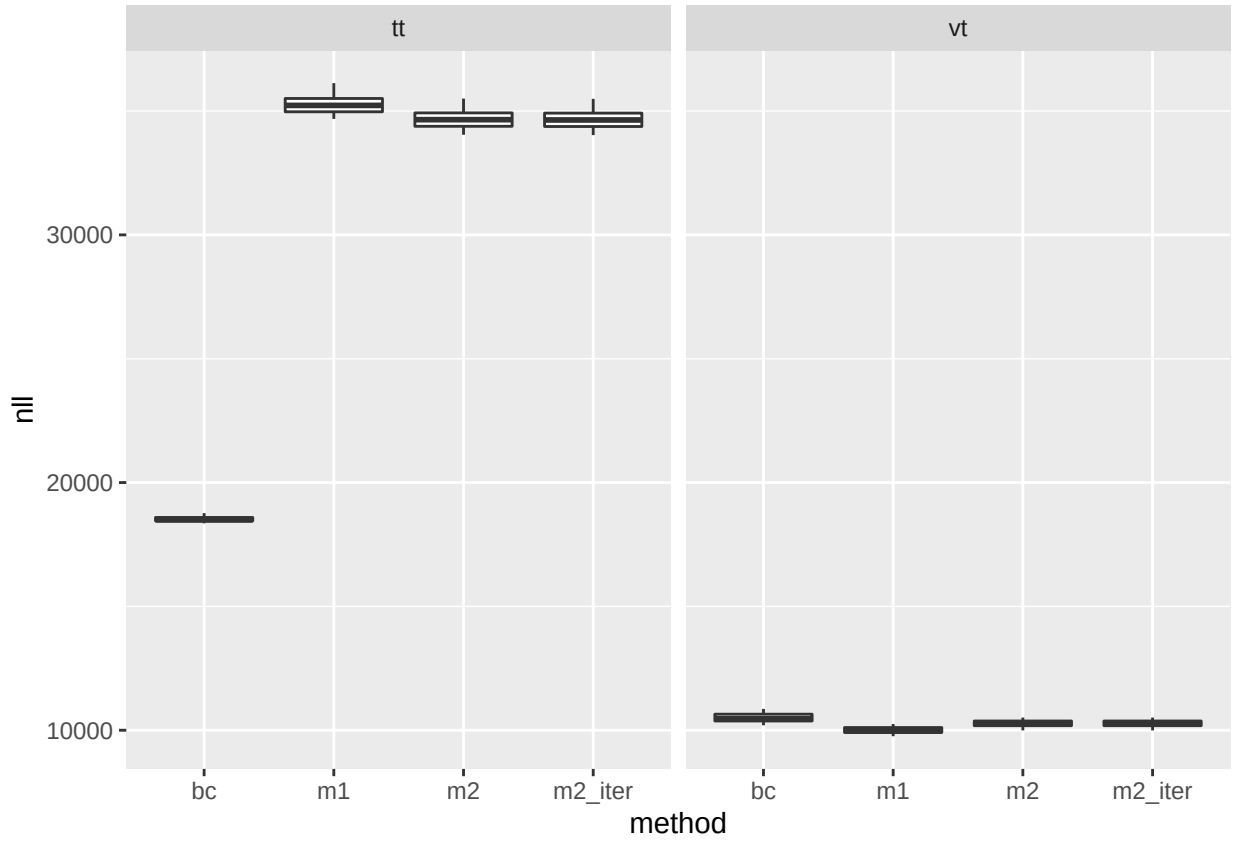



```
val_ens_zero_counts <- ggplot(data=val_ens_cor_probs[val_ens_cor_probs$prediction <= 0, ]) + geom_histog
```

```
## Warning: Ignoring unknown parameters: binwidth, bins, pad
```

```
val_ens_zero_counts
```


```
val_ens_nll <- ggplot(data=ens_results) + geom_boxplot(mapping=aes(x=method, y=nll)) + facet_wrap(~trai
val_ens_nll
```

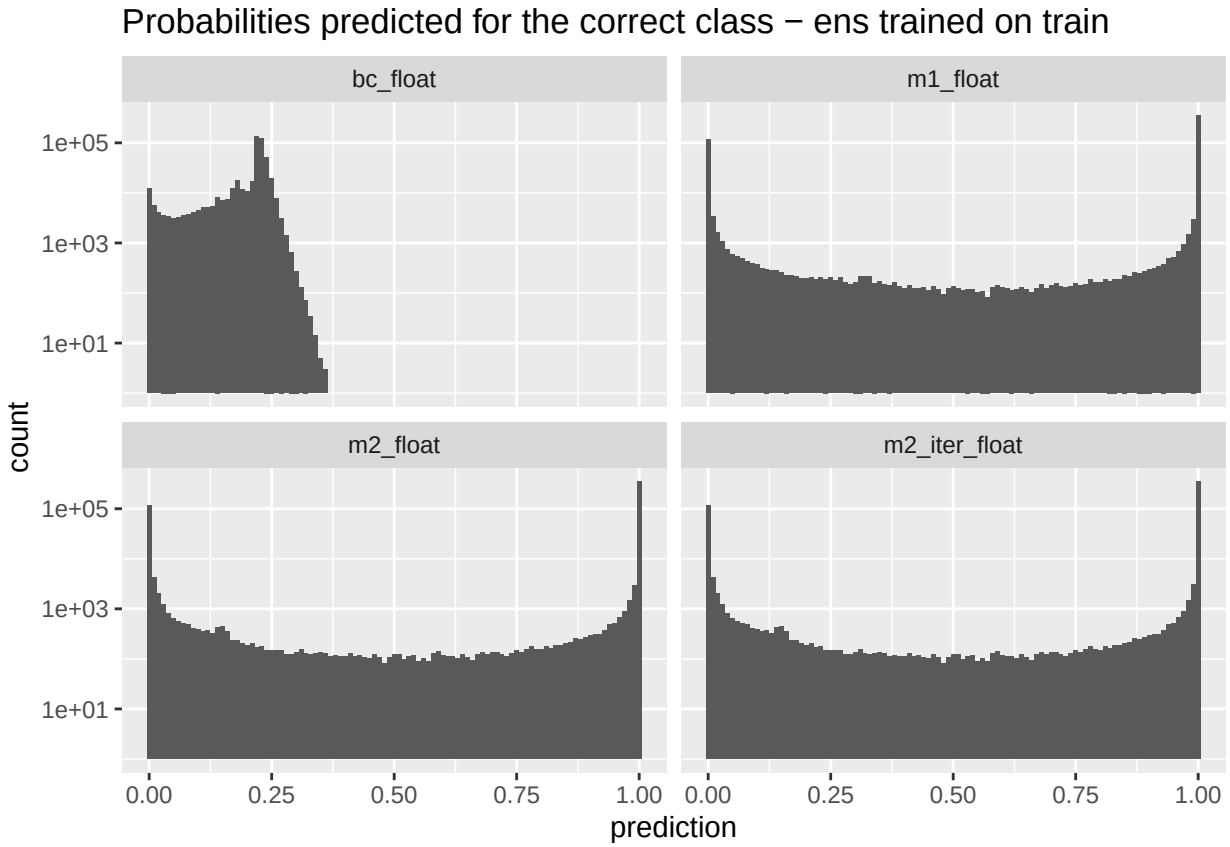



```
train_ens_cor_probs <- gather(ens_outputs$train_training, 1 + nets_outputs$test_labels[1, ], 4, 5)
train_ens_cor_probs <- melt(train_ens_cor_probs)
train_ens_cor_probs <- train_ens_cor_probs[, c(-4, -5)]
names(train_ens_cor_probs) <- c("replication", "method", "fold", "prediction")
train_ens_cor_probs$method <- as.factor(train_ens_cor_probs$method)
levels(train_ens_cor_probs$method) <- ens_outputs$methods
```

```
train_ens_cor_preds_histo <- ggplot(data=train_ens_cor_probs) + geom_histogram(mapping=aes(x=prediction
train_ens_cor_preds_histo
```

```
## Warning: Transformation introduced infinite values in continuous y-axis
```

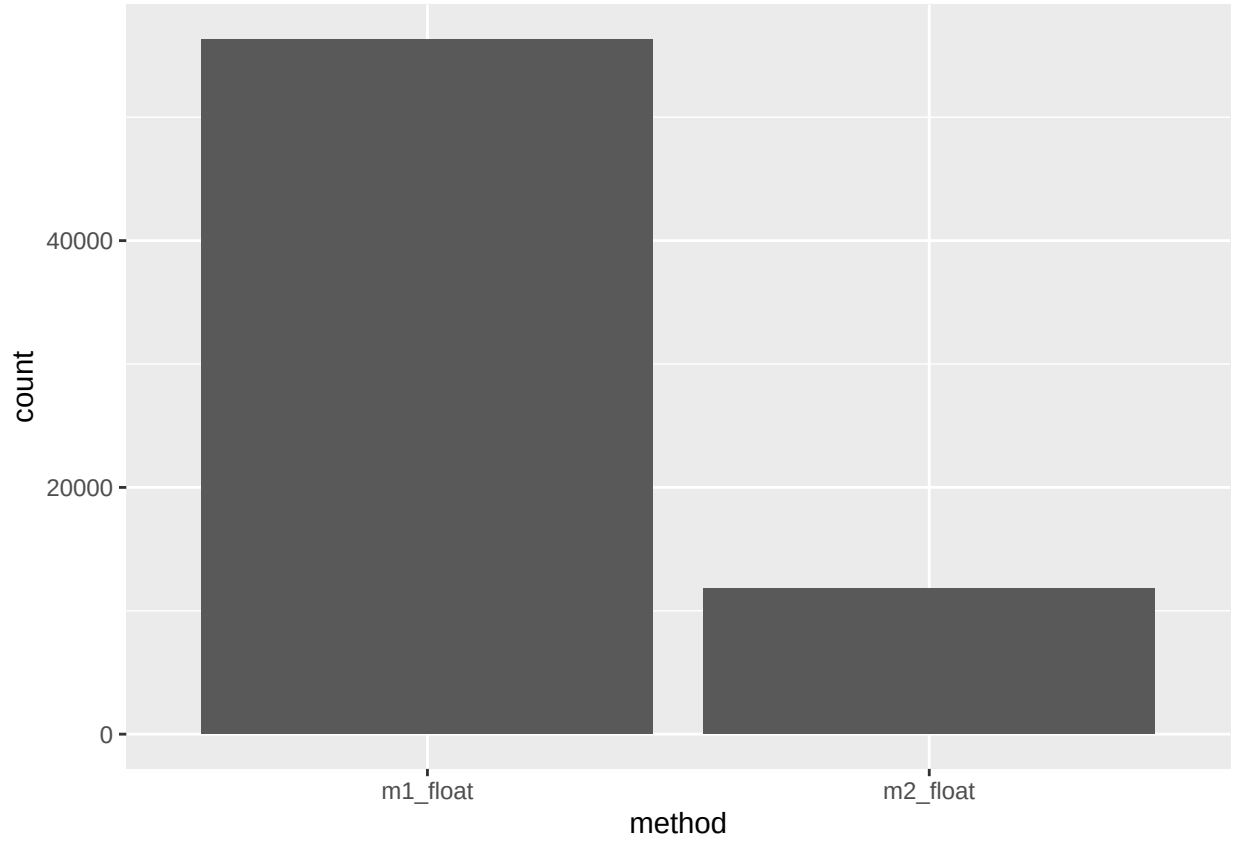
```
## Warning: Removed 64 rows containing missing values (geom_bar).
```




```
train_ens_zero_counts <- ggplot(data=train_ens_cor_probs[train_ens_cor_probs$prediction <= 0, ]) + geom_
```

```
## Warning: Ignoring unknown parameters: binwidth, bins, pad
```

```
train_ens_zero_counts
```

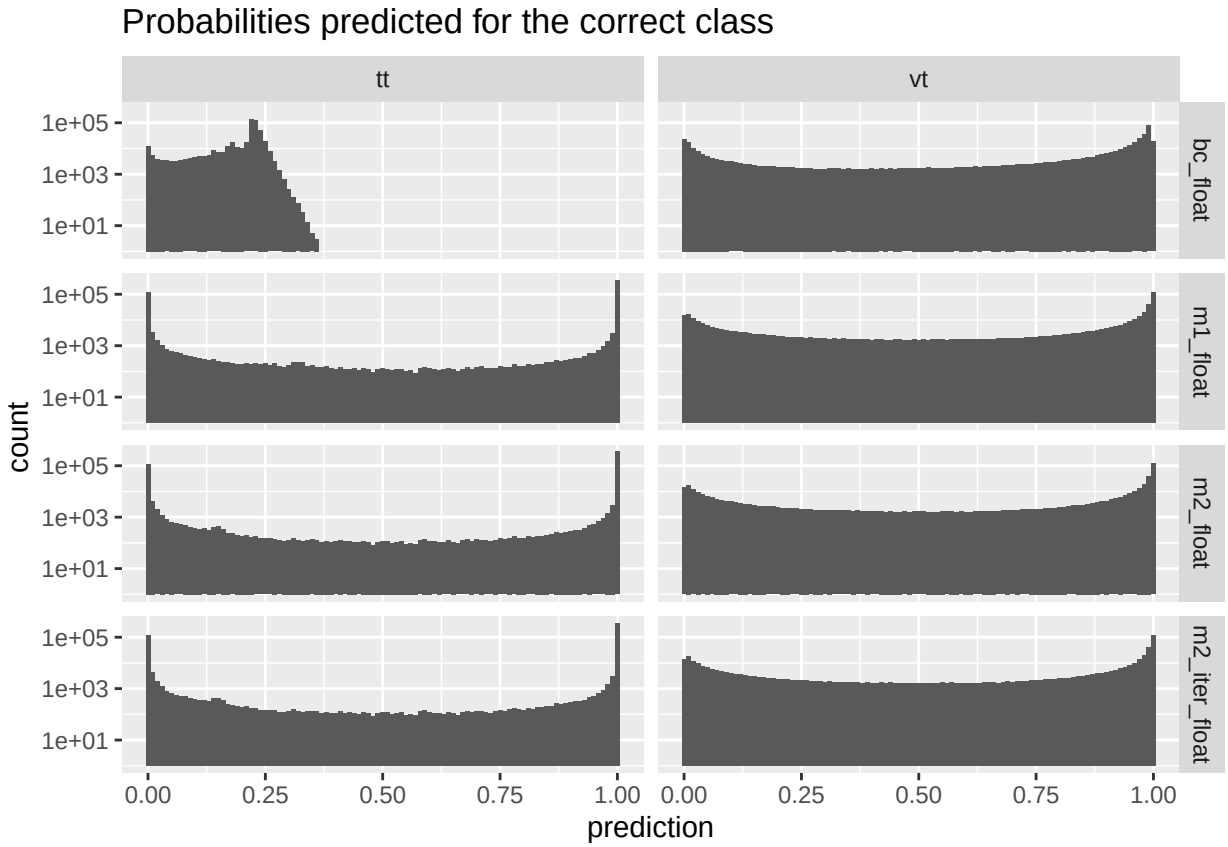



```
val_ens_cor_probs$train_type <- "vt"
train_ens_cor_probs$train_type <- "tt"
ens_cor_probs <- rbind(val_ens_cor_probs, train_ens_cor_probs)
```

```
ens_cor_preds_histo <- ggplot(data=ens_cor_probs) + geom_histogram(mapping=aes(x=prediction), binwidth=
ens_cor_preds_histo
```

```
## Warning: Transformation introduced infinite values in continuous y-axis
```

```
## Warning: Removed 64 rows containing missing values (geom_bar).
```

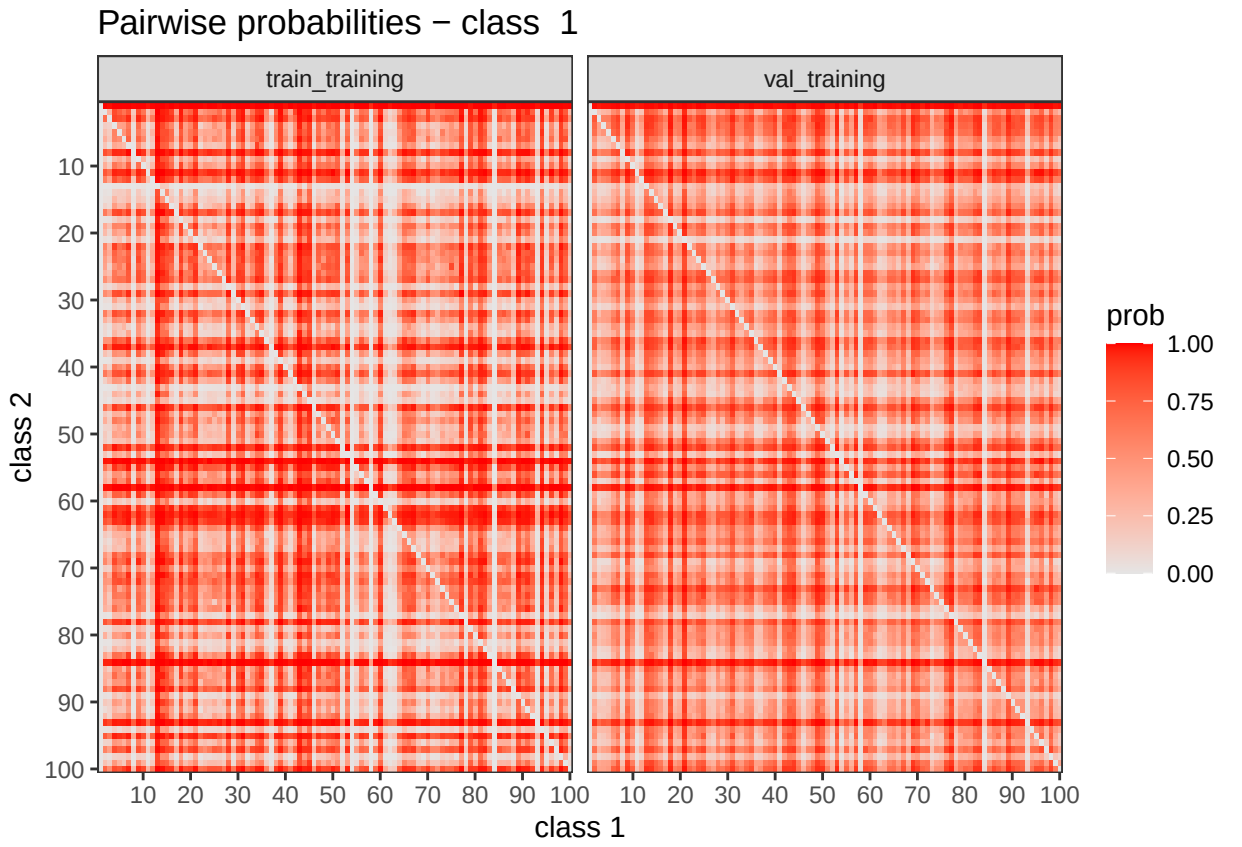


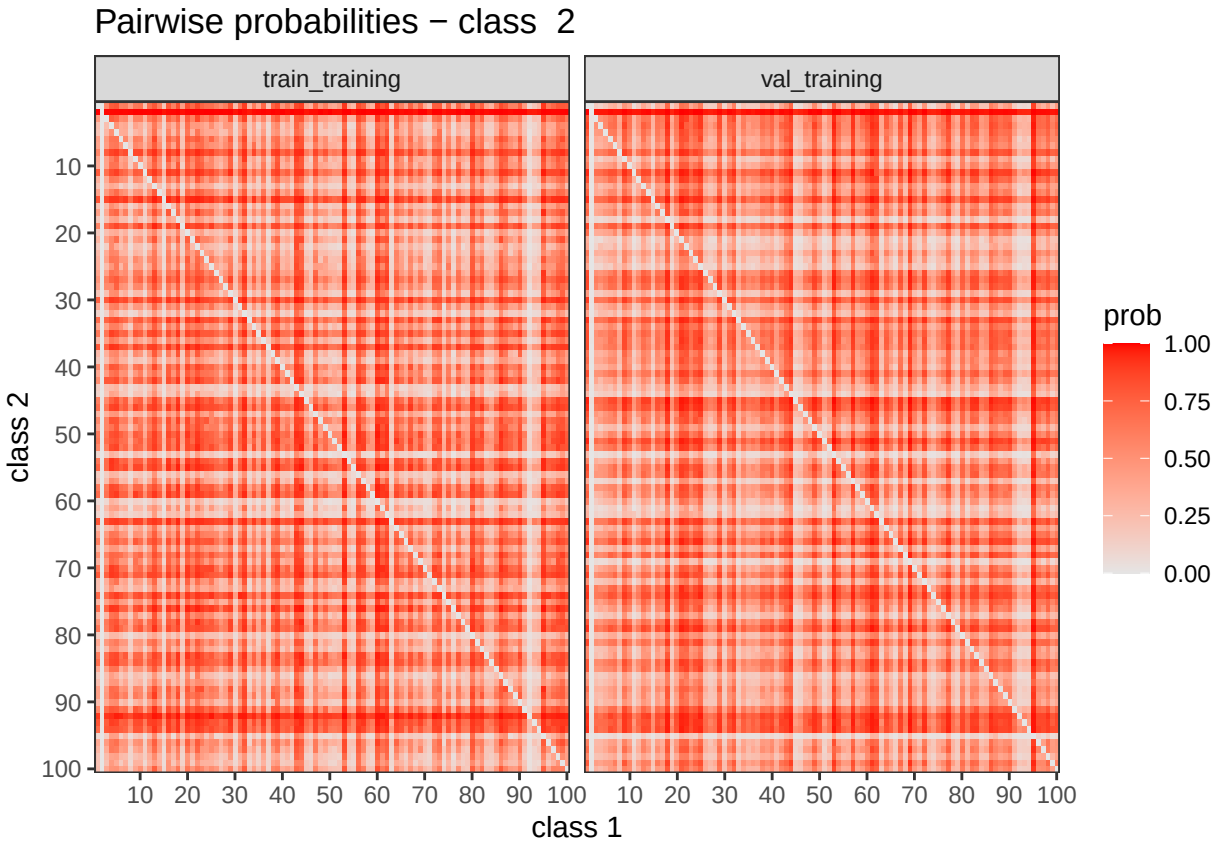
Very strange behavior for the bc method trained on training set. Needs further attention.

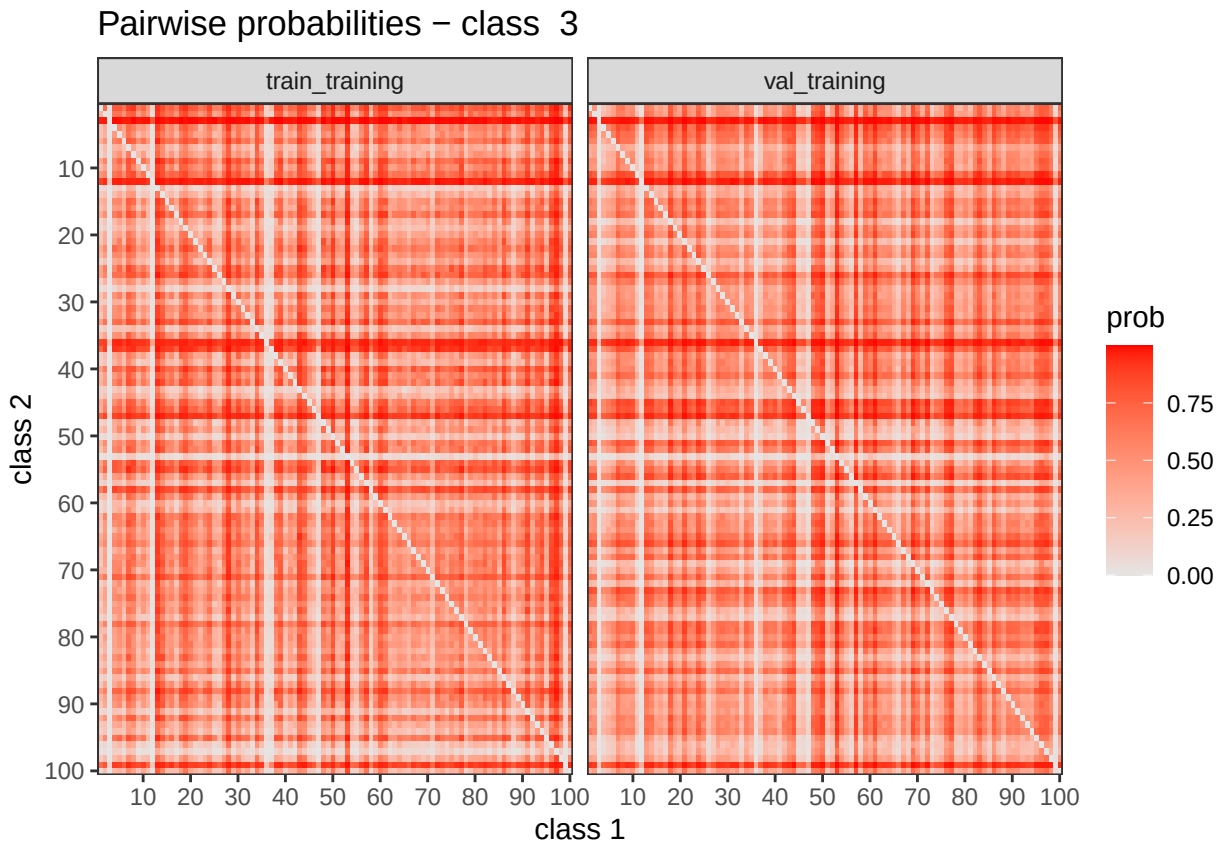
```
val_aggr_Rs <- np$load(file.path(base_dir, "val_training_class_aggr_R.npy"))
train_aggr_Rs <- np$load(file.path(base_dir, "train_training_class_aggr_R.npy"))
df_val_aggr_Rs <- melt(val_aggr_Rs)
names(df_val_aggr_Rs) <- c("precision", "class", "class1", "class2", "prob")
df_train_aggr_Rs <- melt(train_aggr_Rs)
names(df_train_aggr_Rs) <- c("precision", "class", "class1", "class2", "prob")
df_val_aggr_Rs$train_type <- "val_training"
df_train_aggr_Rs$train_type <- "train_training"
df_aggr_Rs <- rbind(df_val_aggr_Rs, df_train_aggr_Rs)
df_aggr_Rs[, c("class", "class1", "class2")] <- lapply(df_aggr_Rs[, c("class", "class1", "class2")], as
```

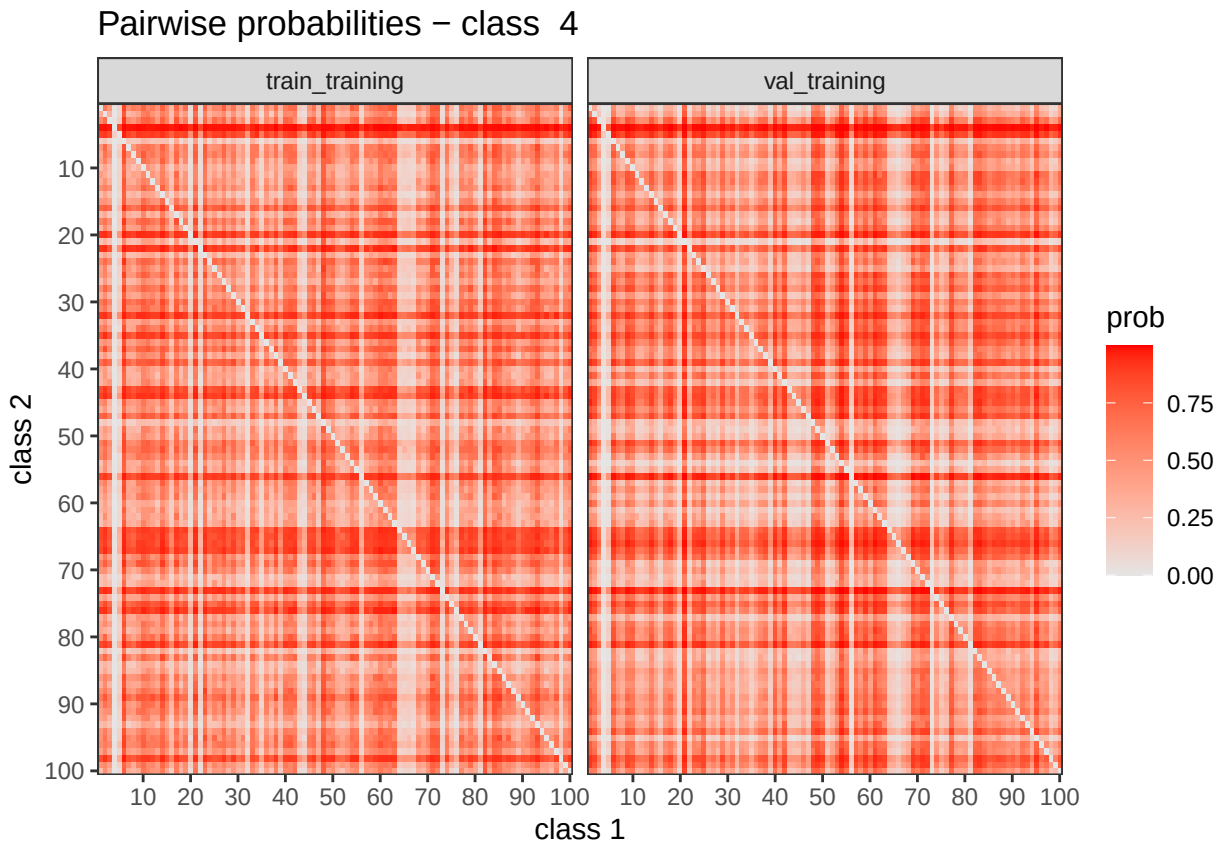
```
for (cls in 1:classes)
{
  cur_class_Rs <- df_aggr_Rs %>% filter(class == cls)
  plot_cls <-  ggplot(cur_class_Rs, aes(x = class2, y = class1)) +
    geom_raster(aes(fill=prob)) +
    facet_wrap(~train_type) +
    scale_fill_gradient(low="grey90", high="red") +
    scale_y_discrete(limits=rev, breaks=seq(0, classes, 10)) +
    scale_x_discrete(breaks=seq(0, classes, 10)) +
    labs(x="class 1", y="class 2", title=paste("Pairwise probabilities - class ", cls)) +
    theme_bw()

  print(plot_cls)
```

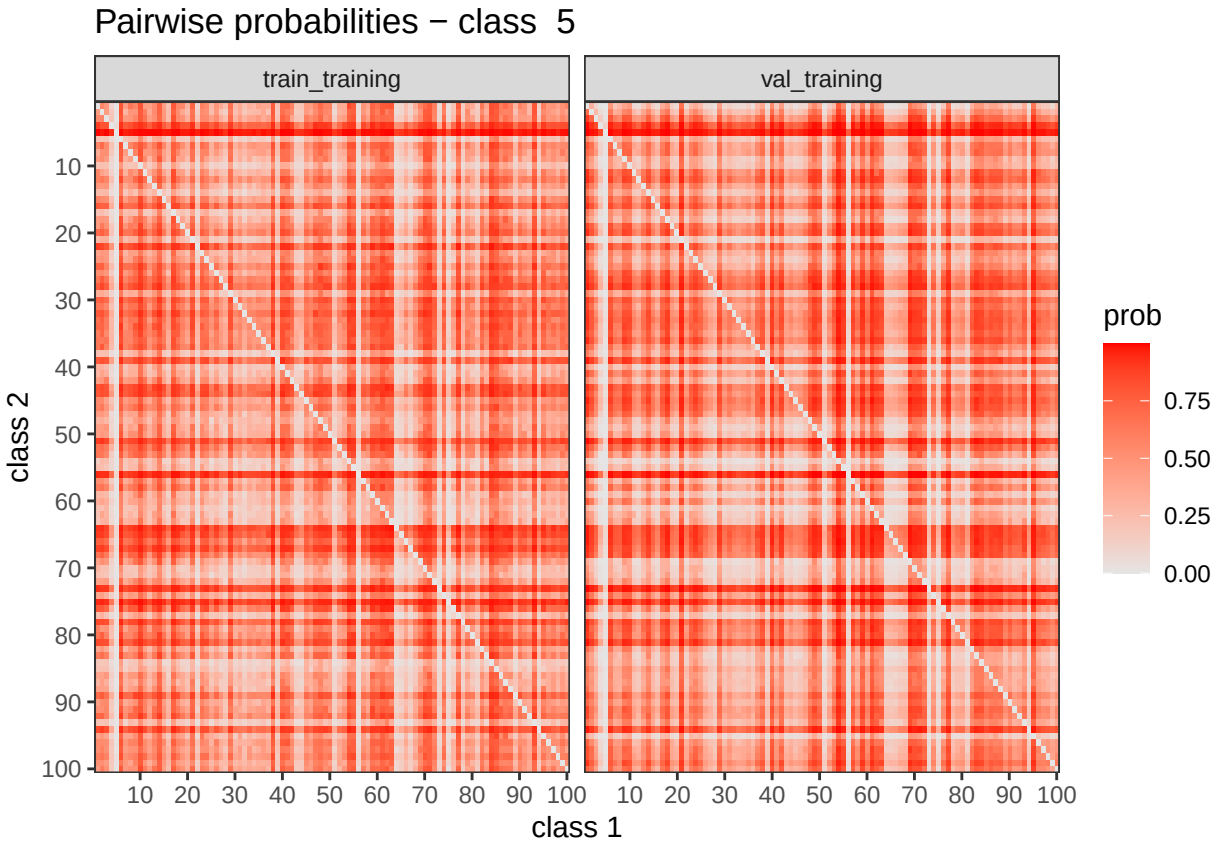
```
}
```

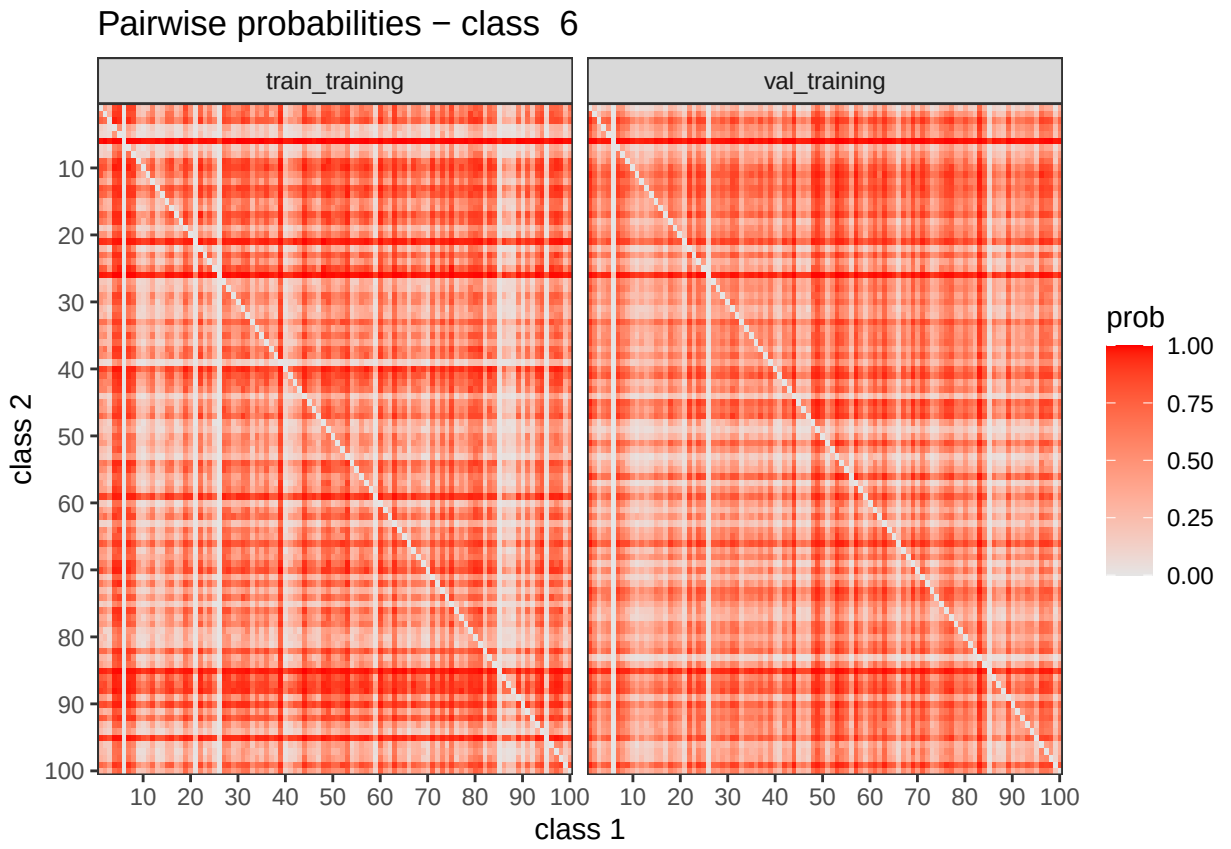

Pairwise probabilities − class 1
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

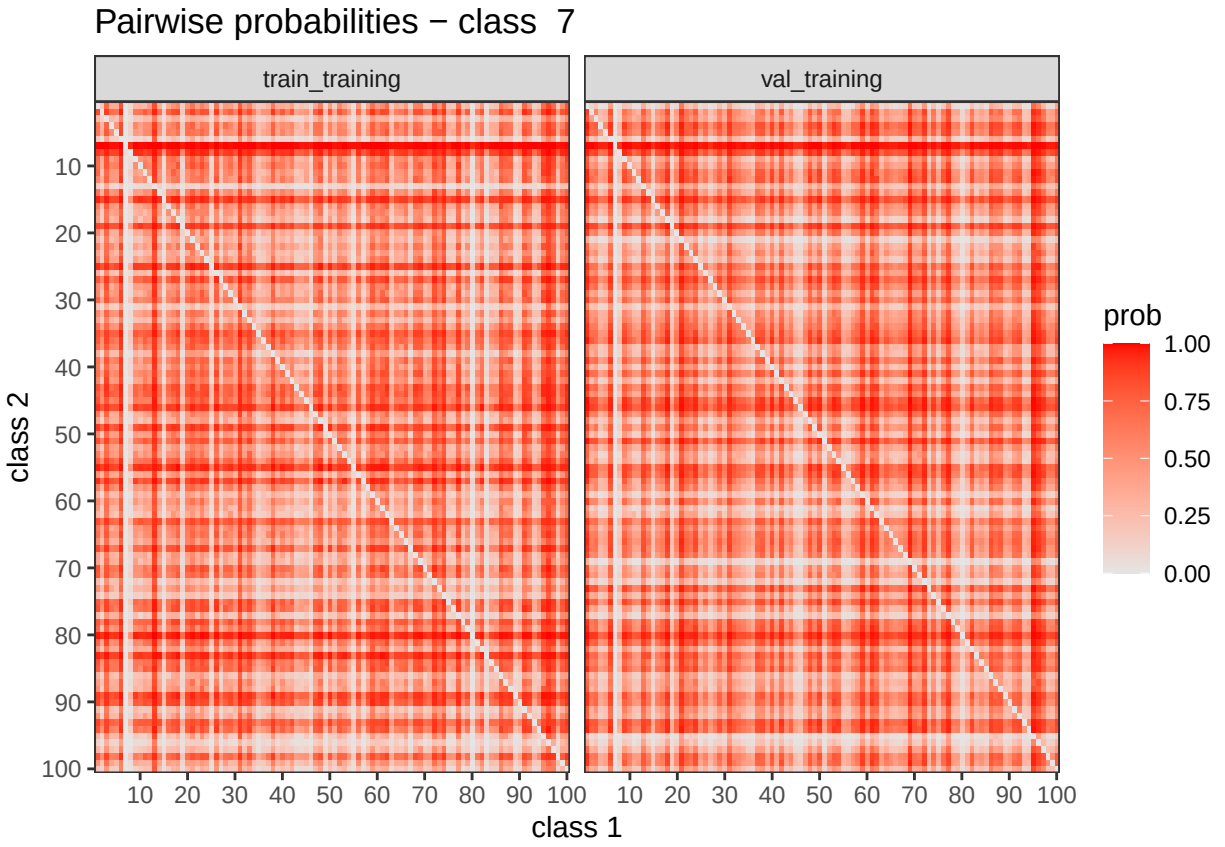

Pairwise probabilities − class 2
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

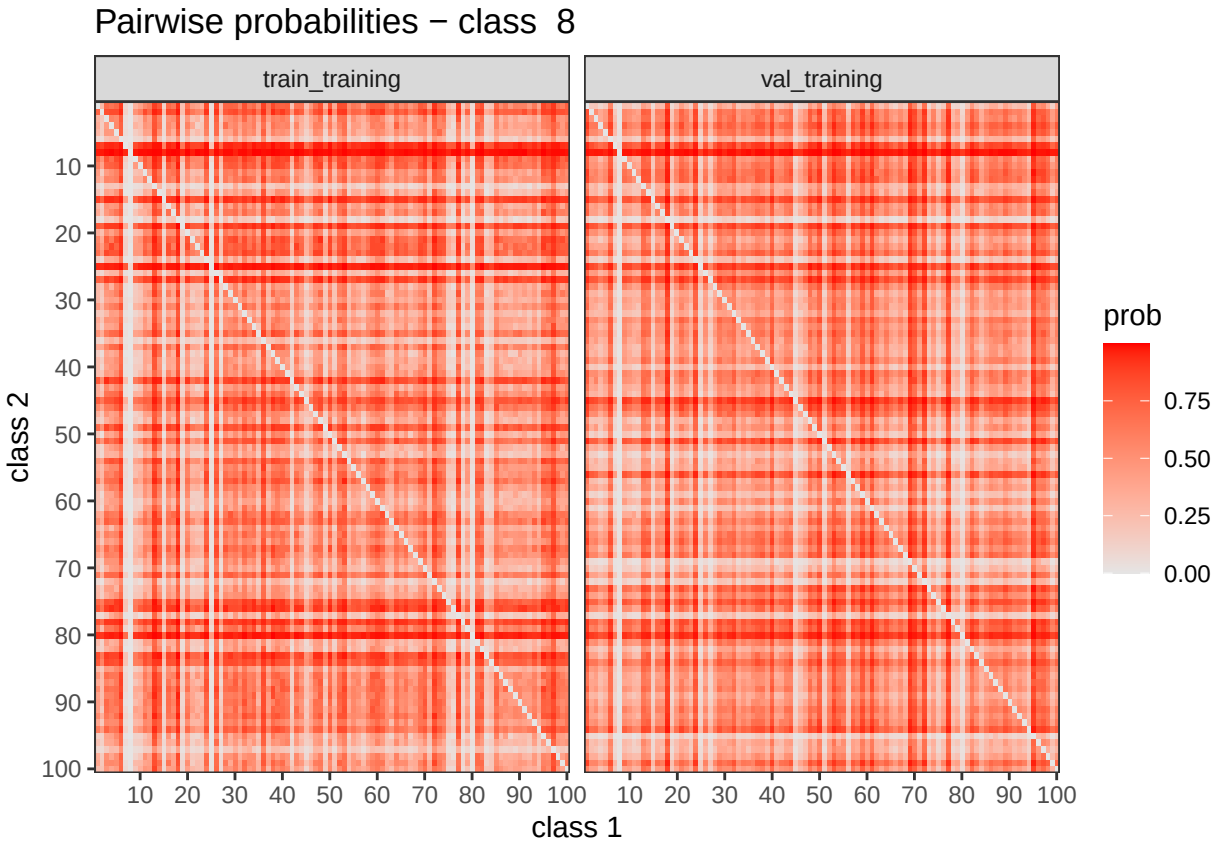

Pairwise probabilities − class 3
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

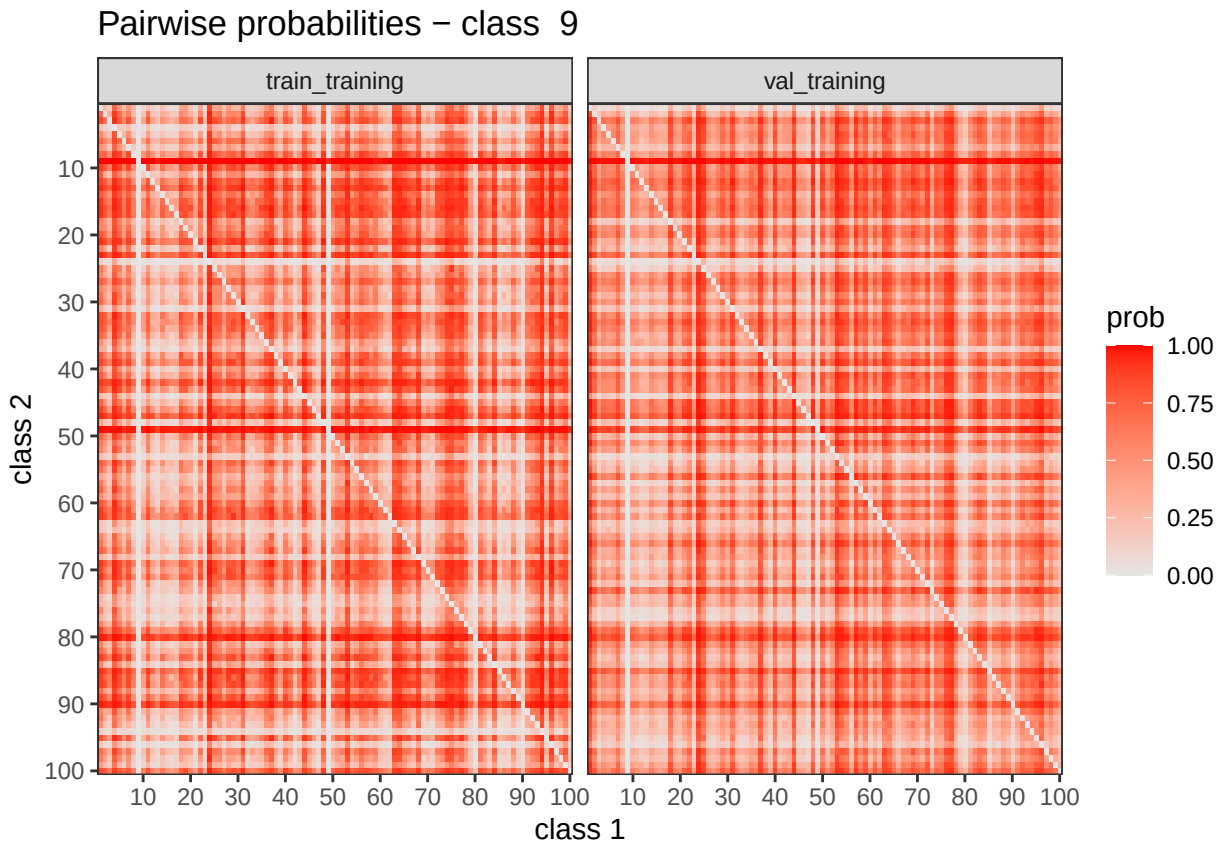

Pairwise probabilities − class 4
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

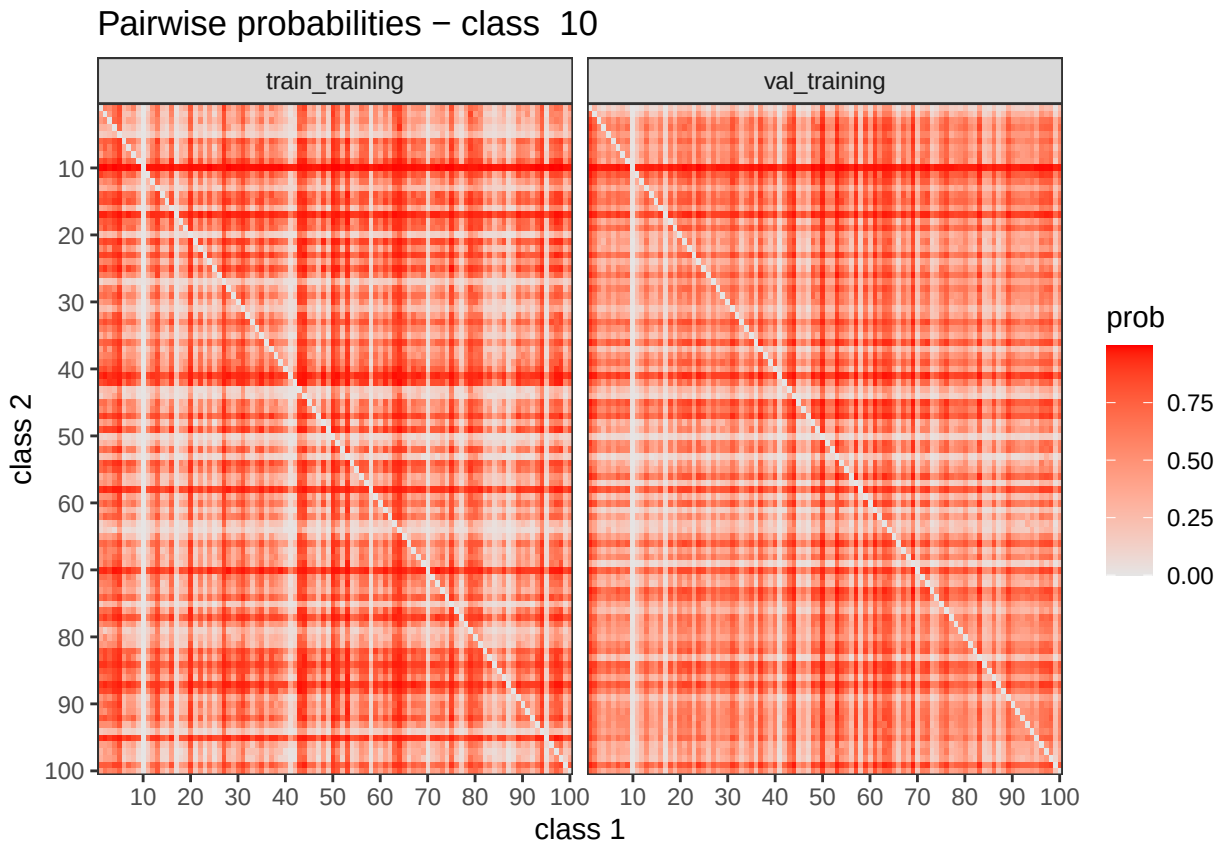

Pairwise probabilities − class 5
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

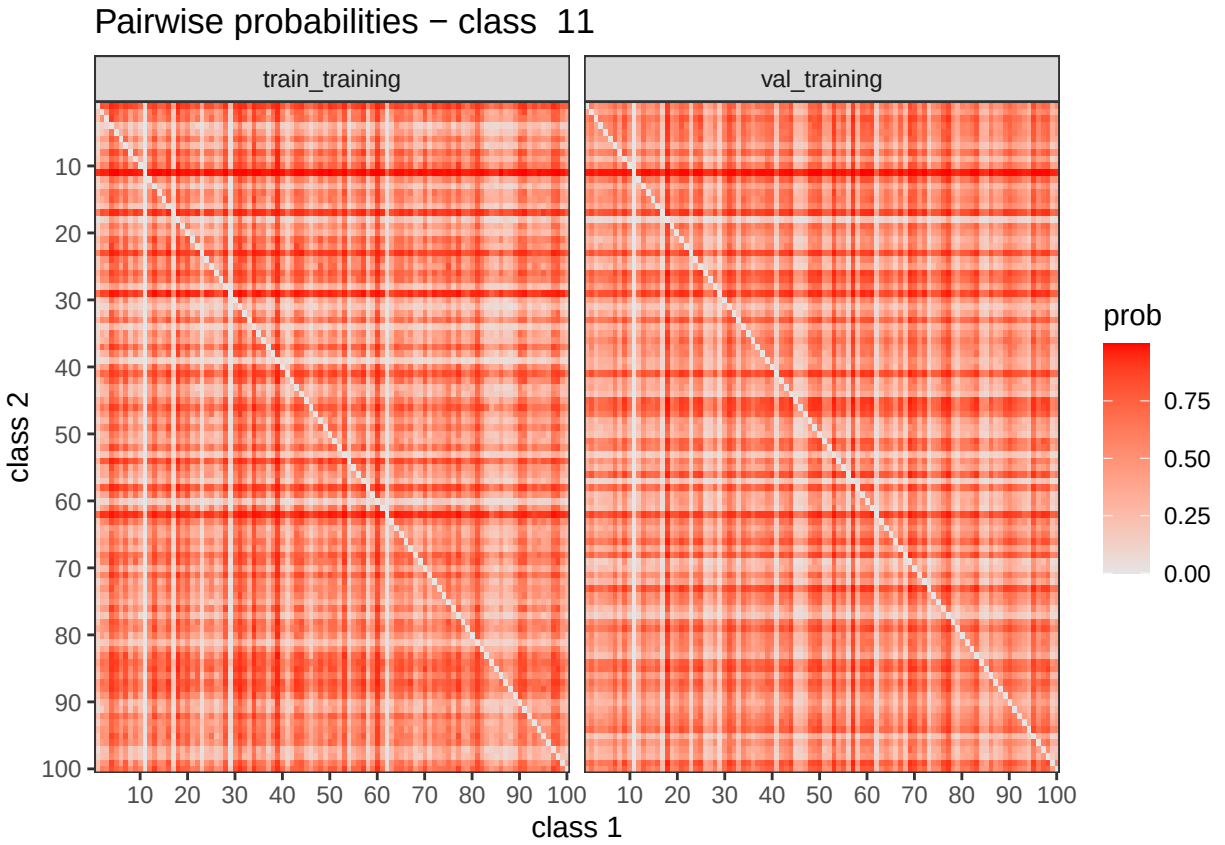

Pairwise probabilities − class 6
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

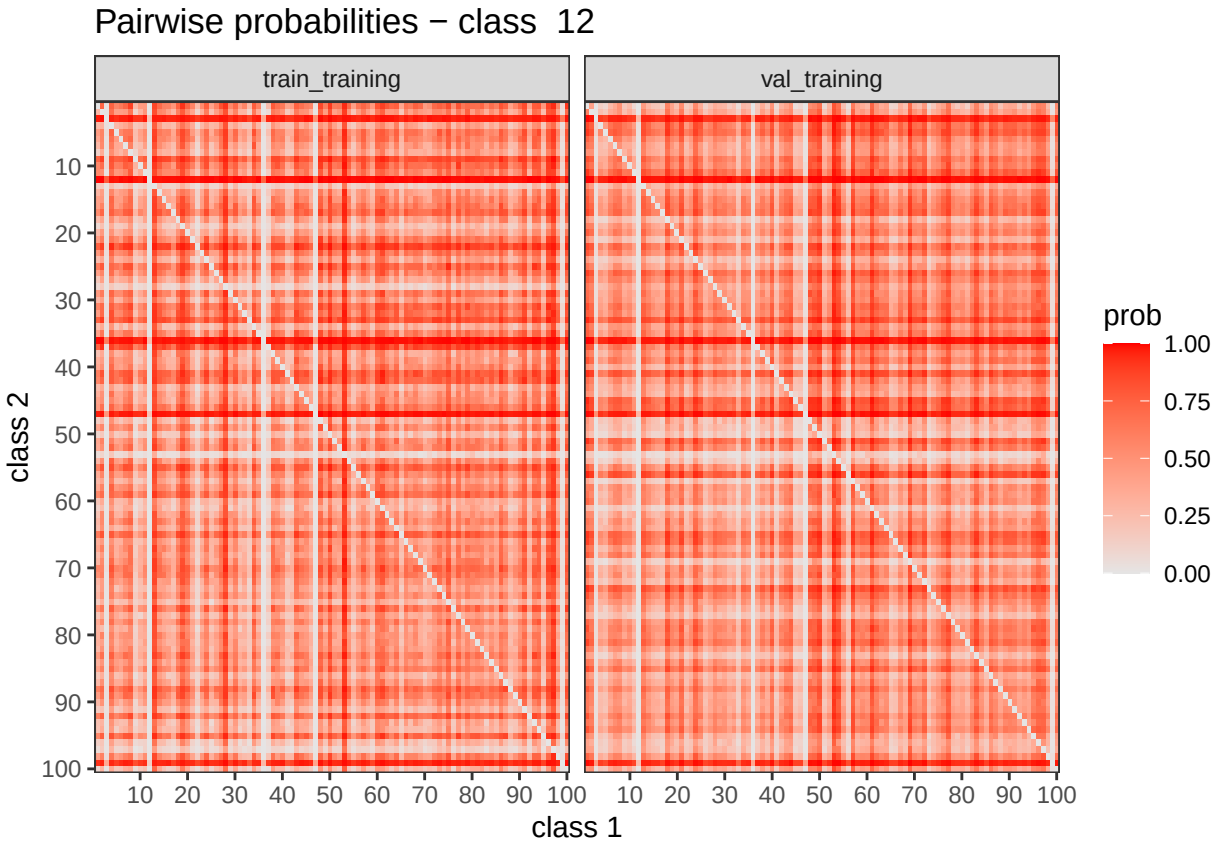

Pairwise probabilities − class 7
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

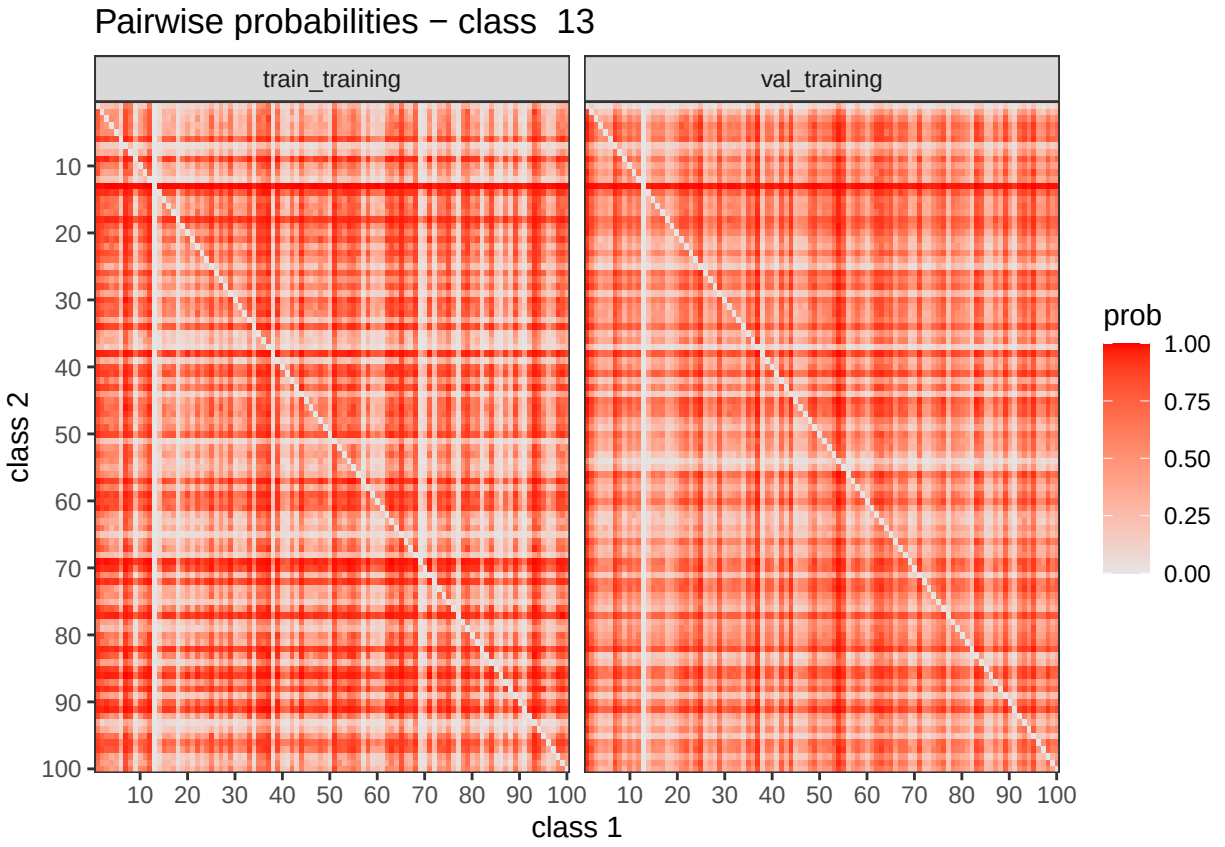

Pairwise probabilities − class 8
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

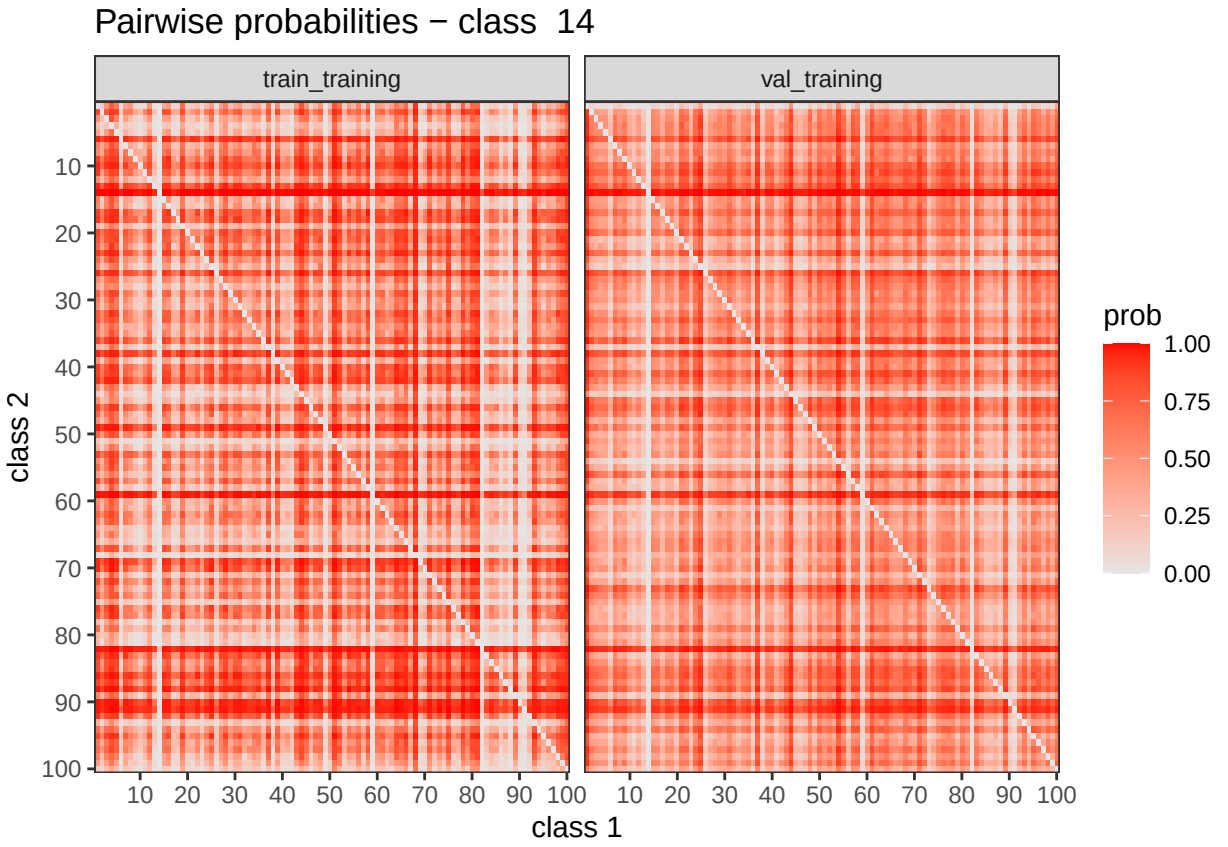

Pairwise probabilities − class 9
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

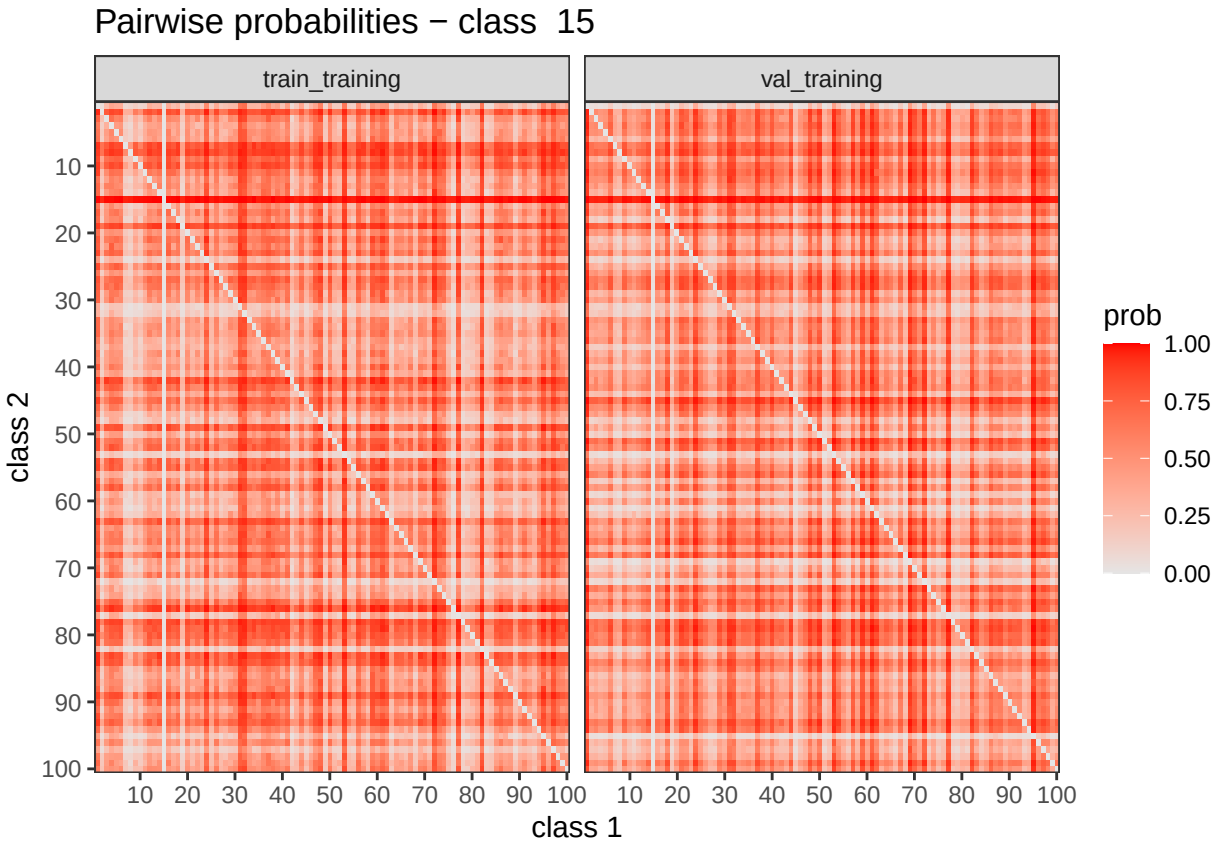

Pairwise probabilities − class 10
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

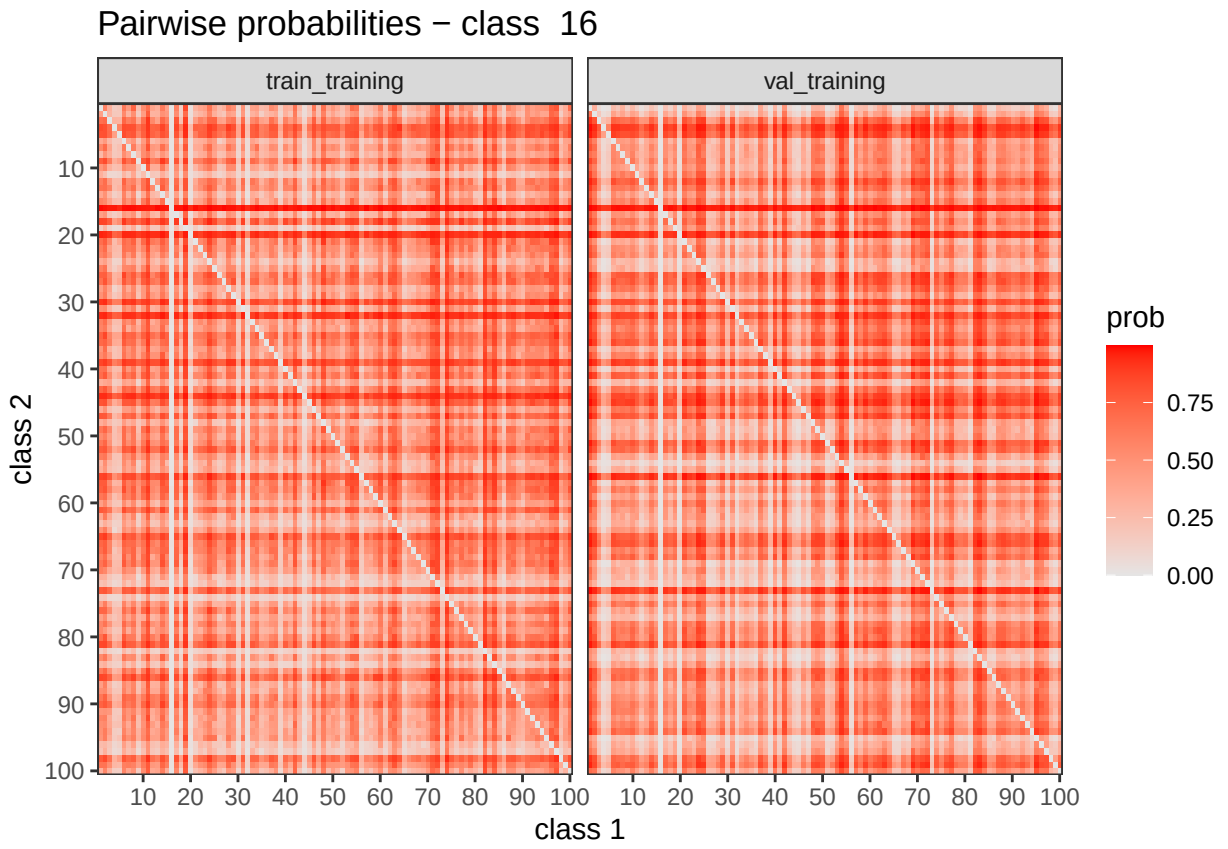

Pairwise probabilities − class 11
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

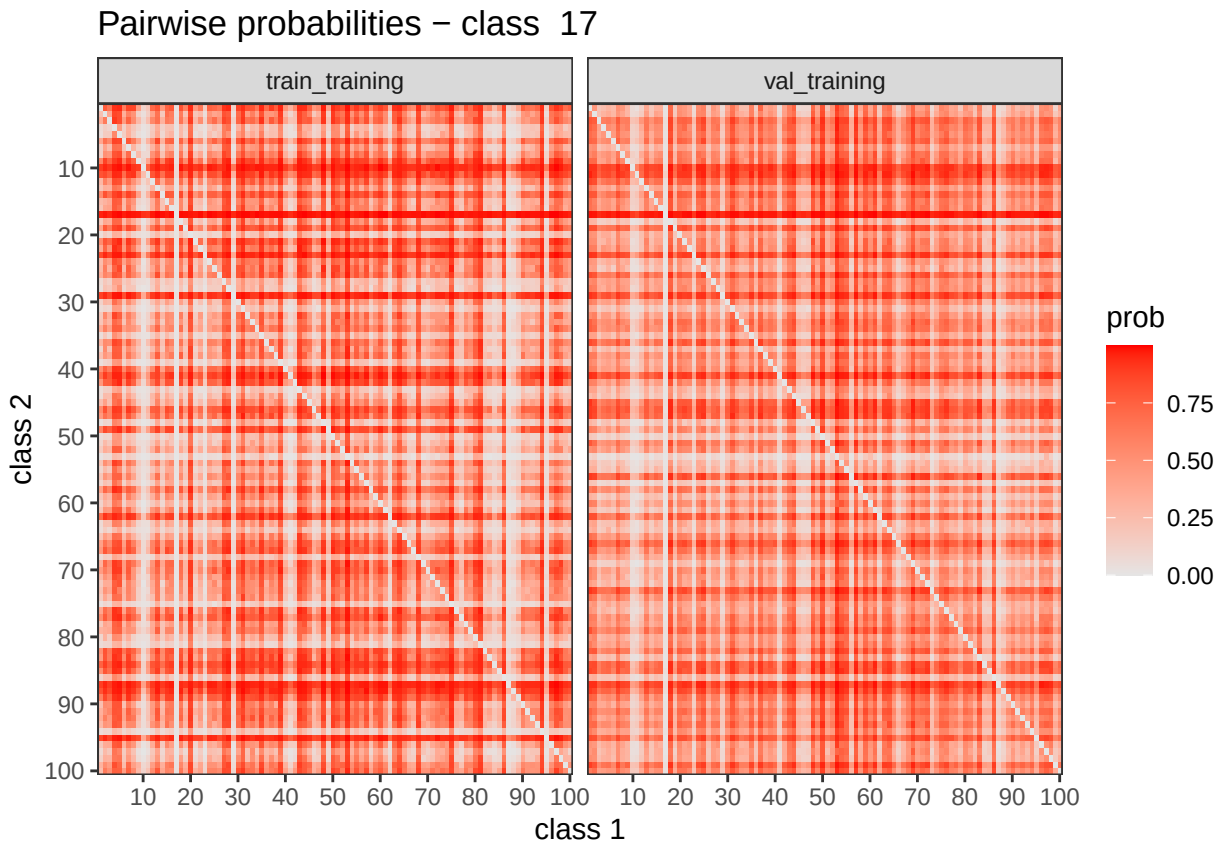

Pairwise probabilities − class 12
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

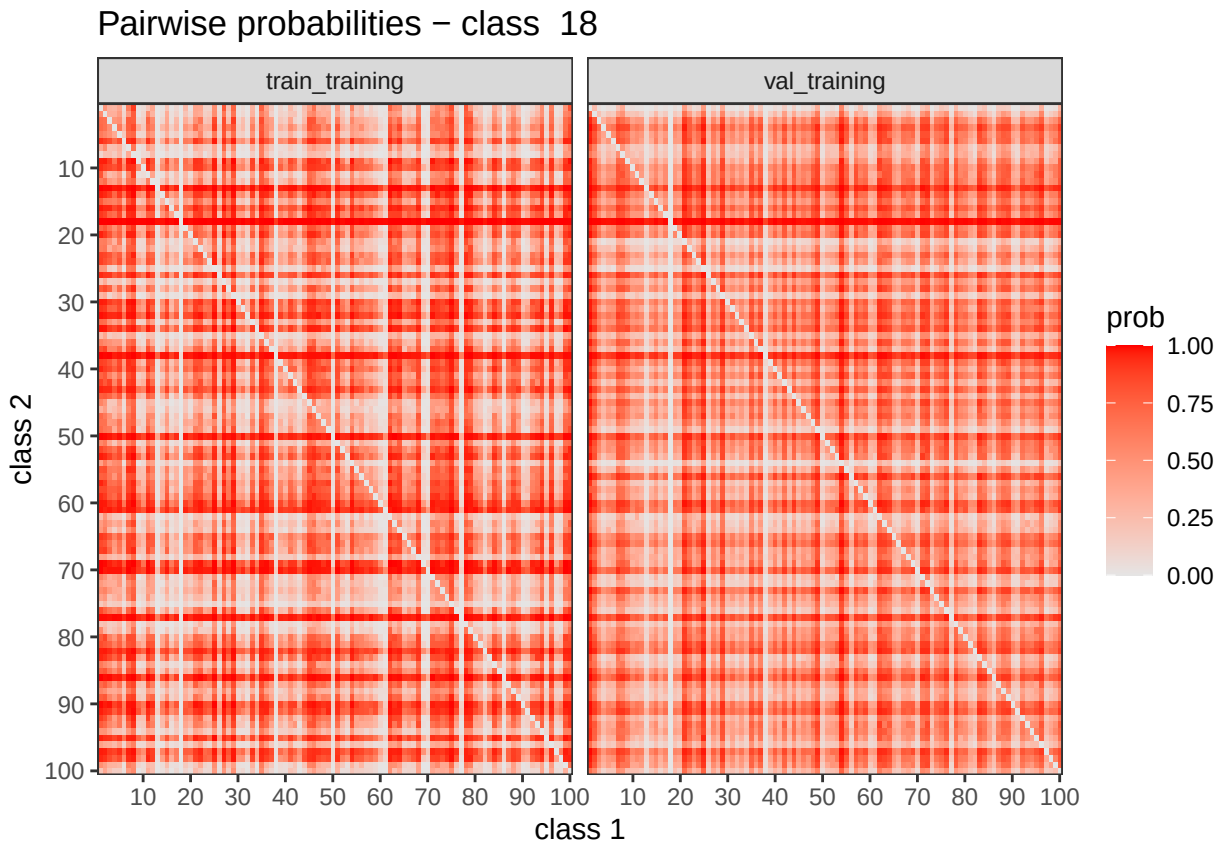

Pairwise probabilities − class 13
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

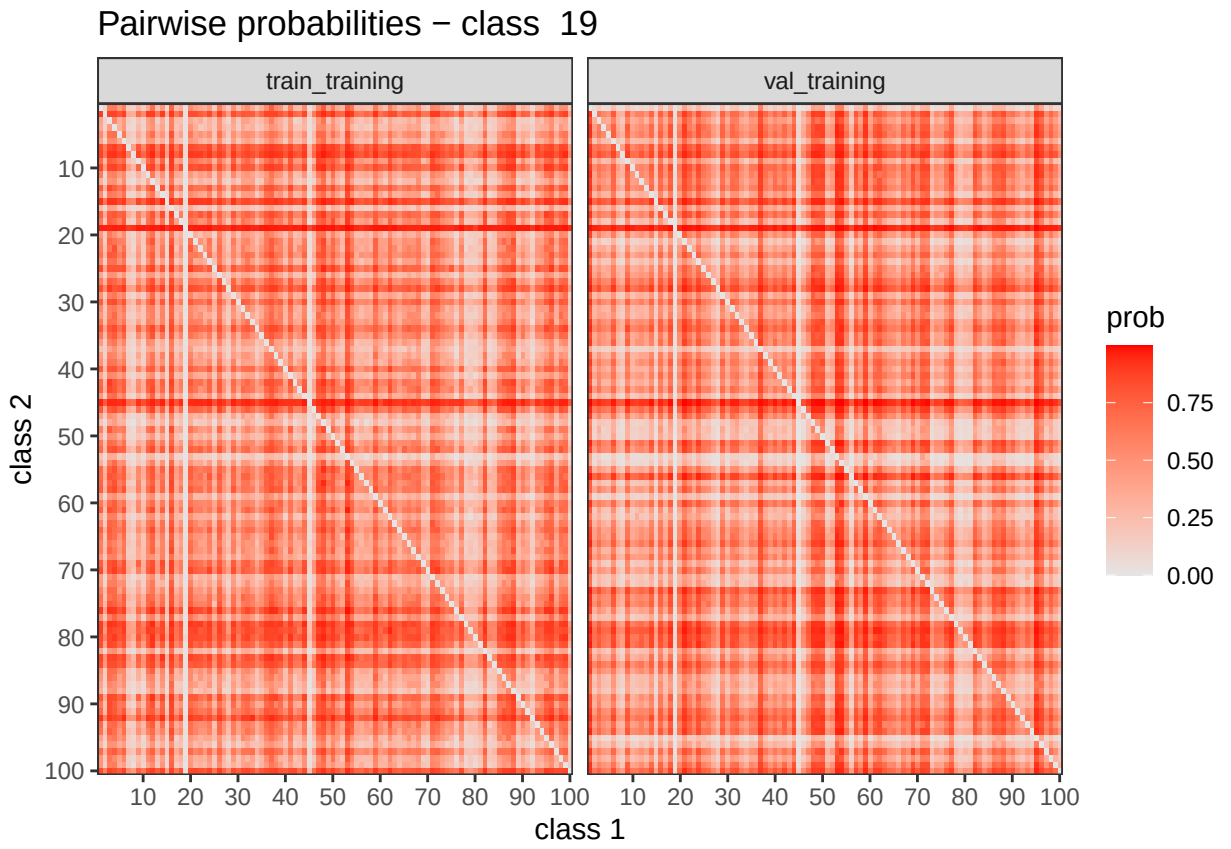

Pairwise probabilities − class 14
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

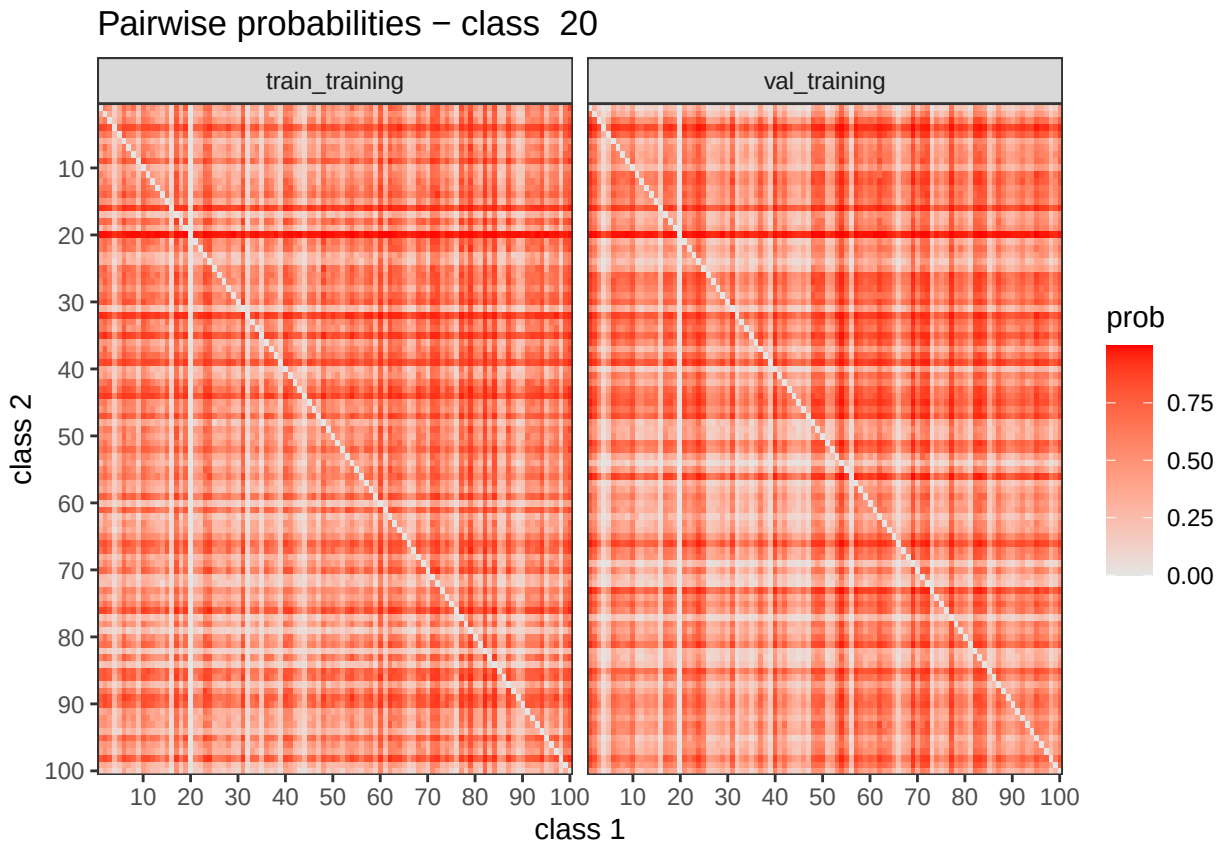

Pairwise probabilities − class 15
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

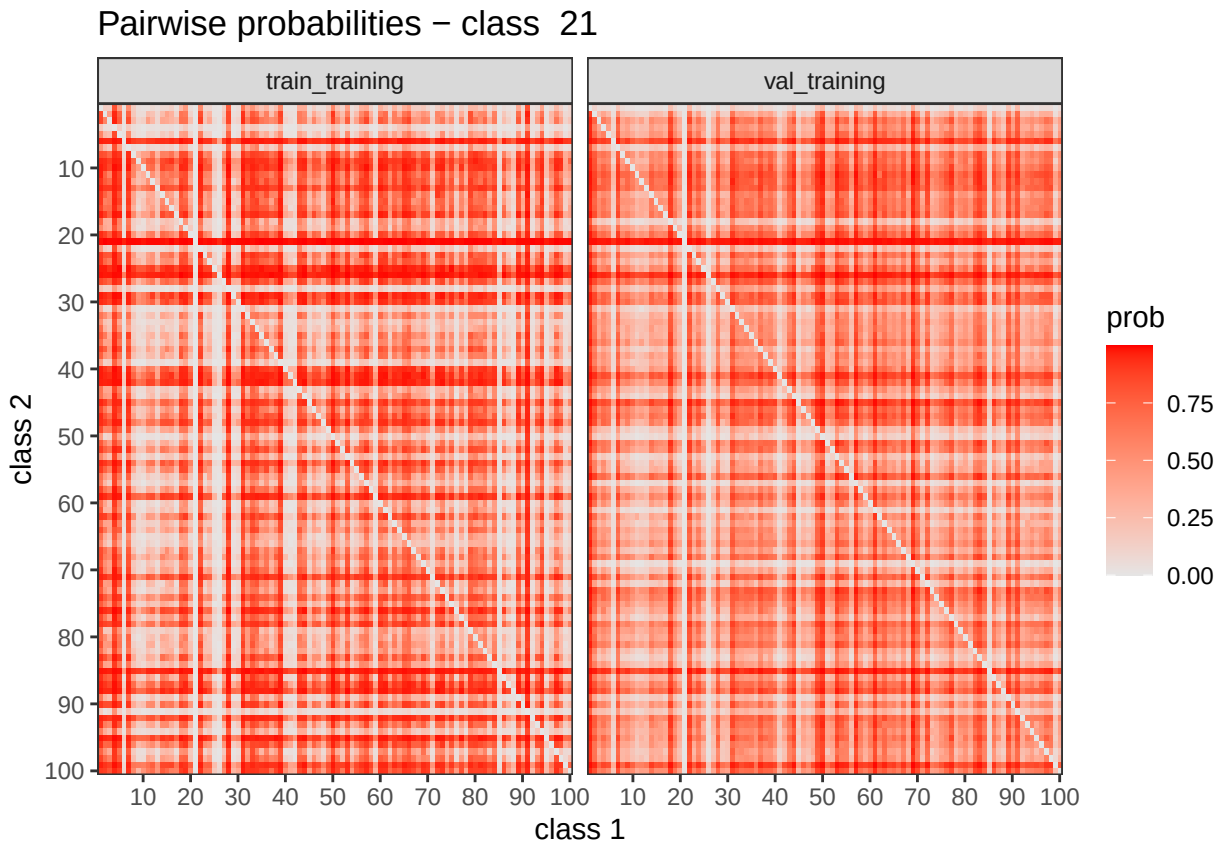

Pairwise probabilities − class 16
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

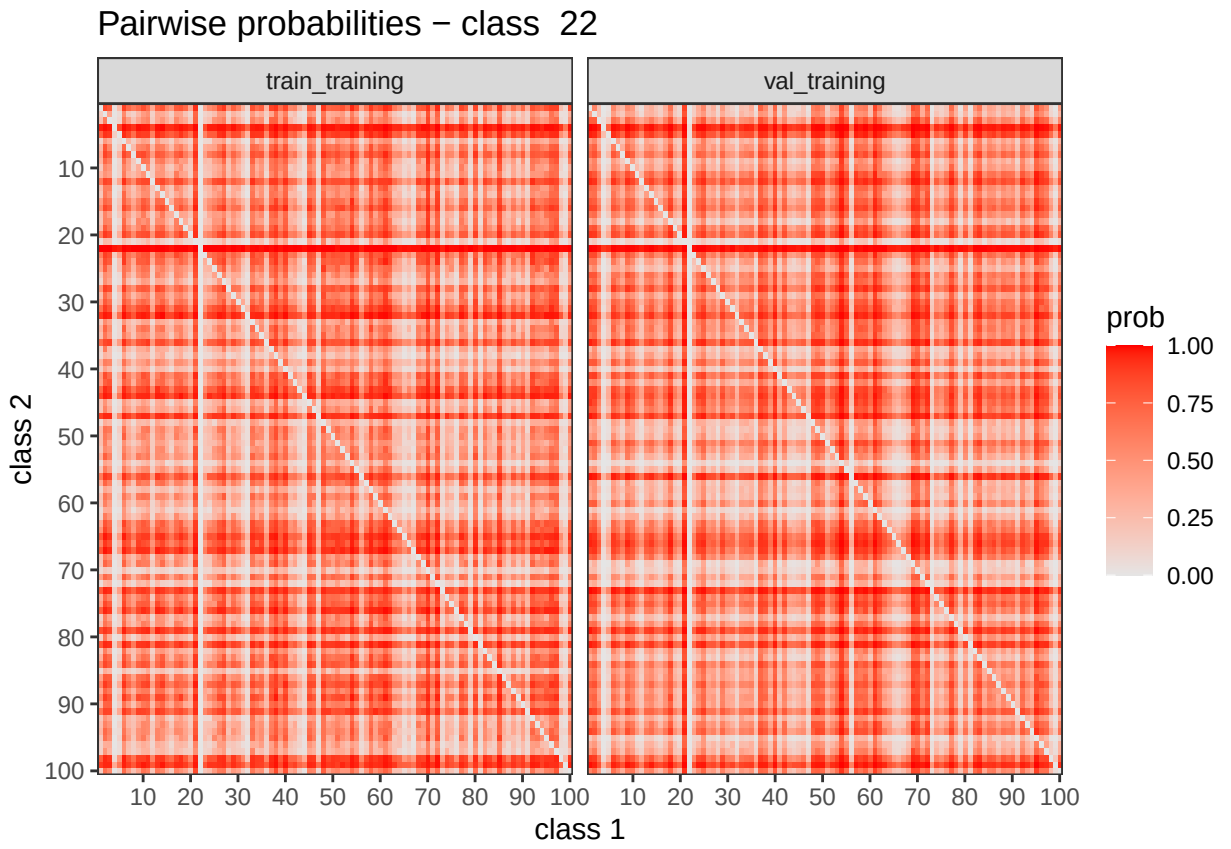

Pairwise probabilities − class 17
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

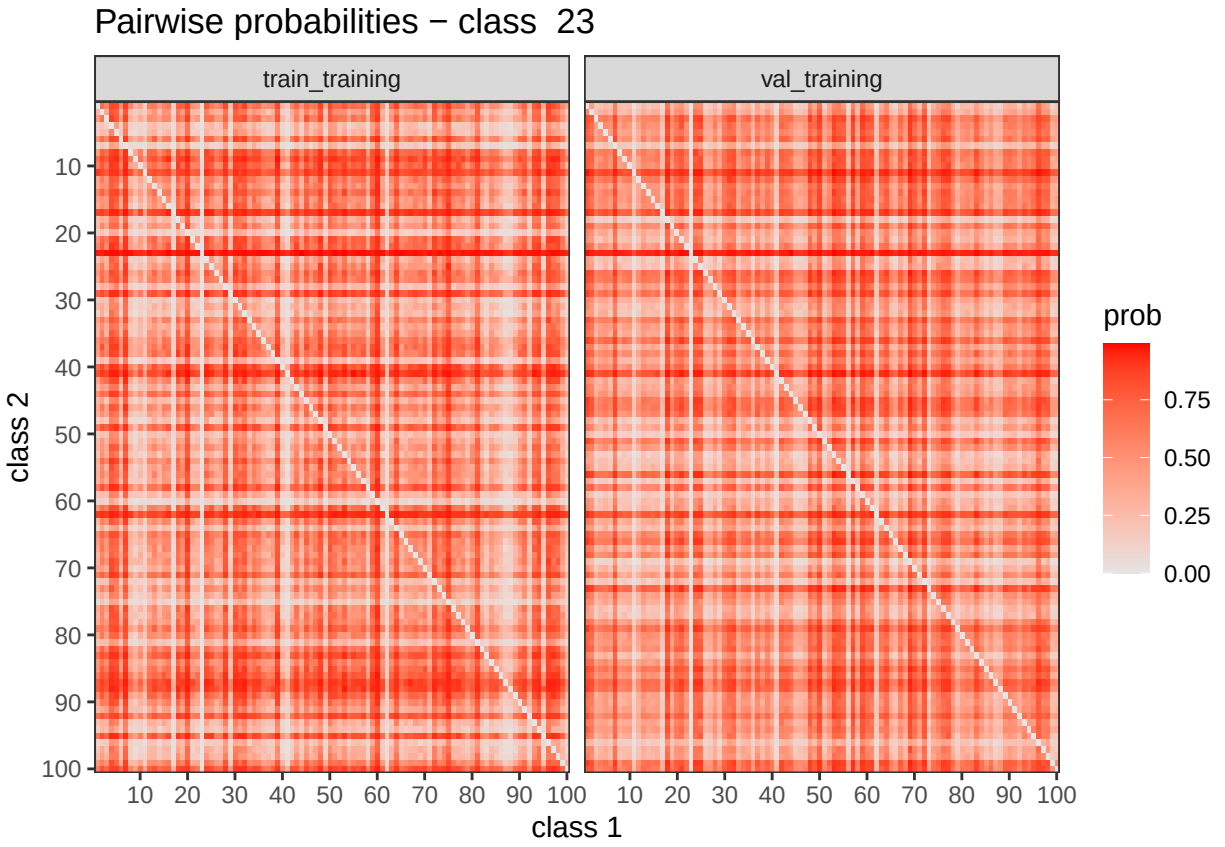

Pairwise probabilities − class 18
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

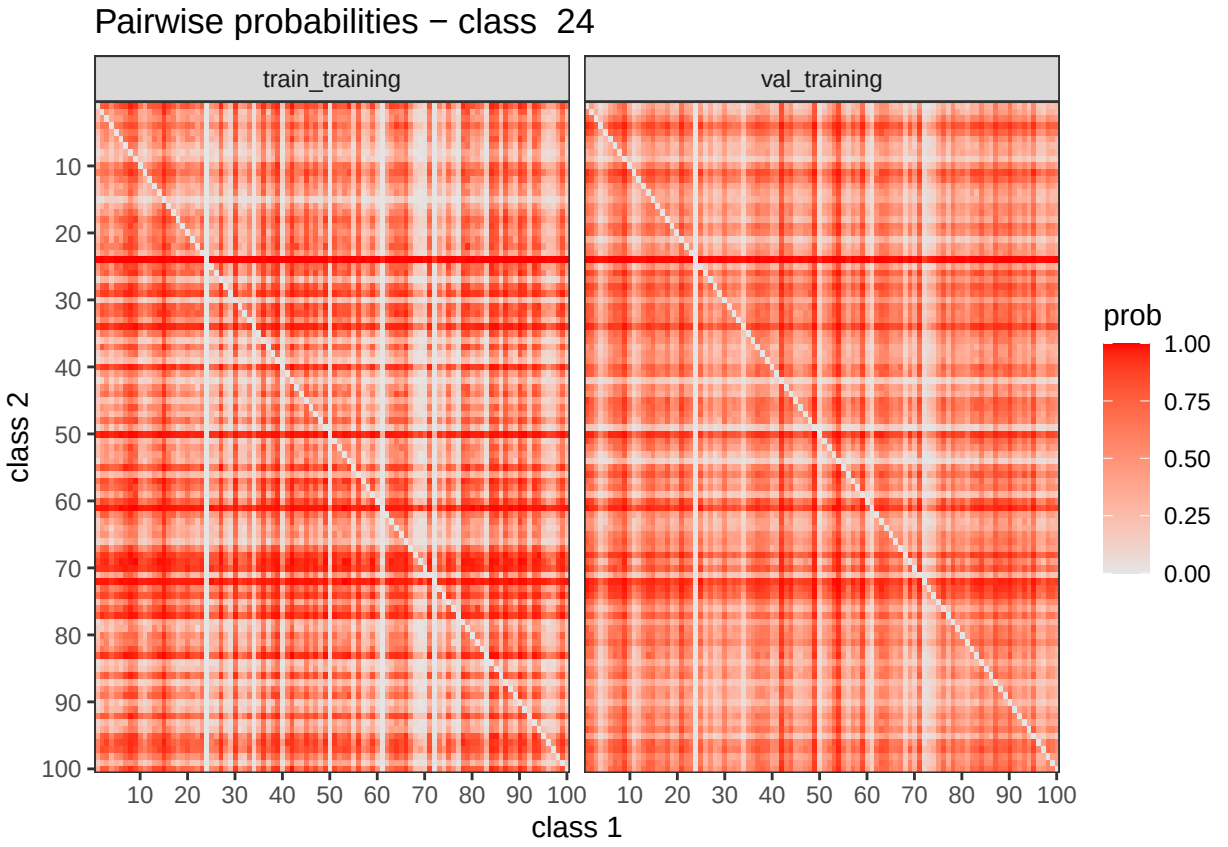

Pairwise probabilities − class 19
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

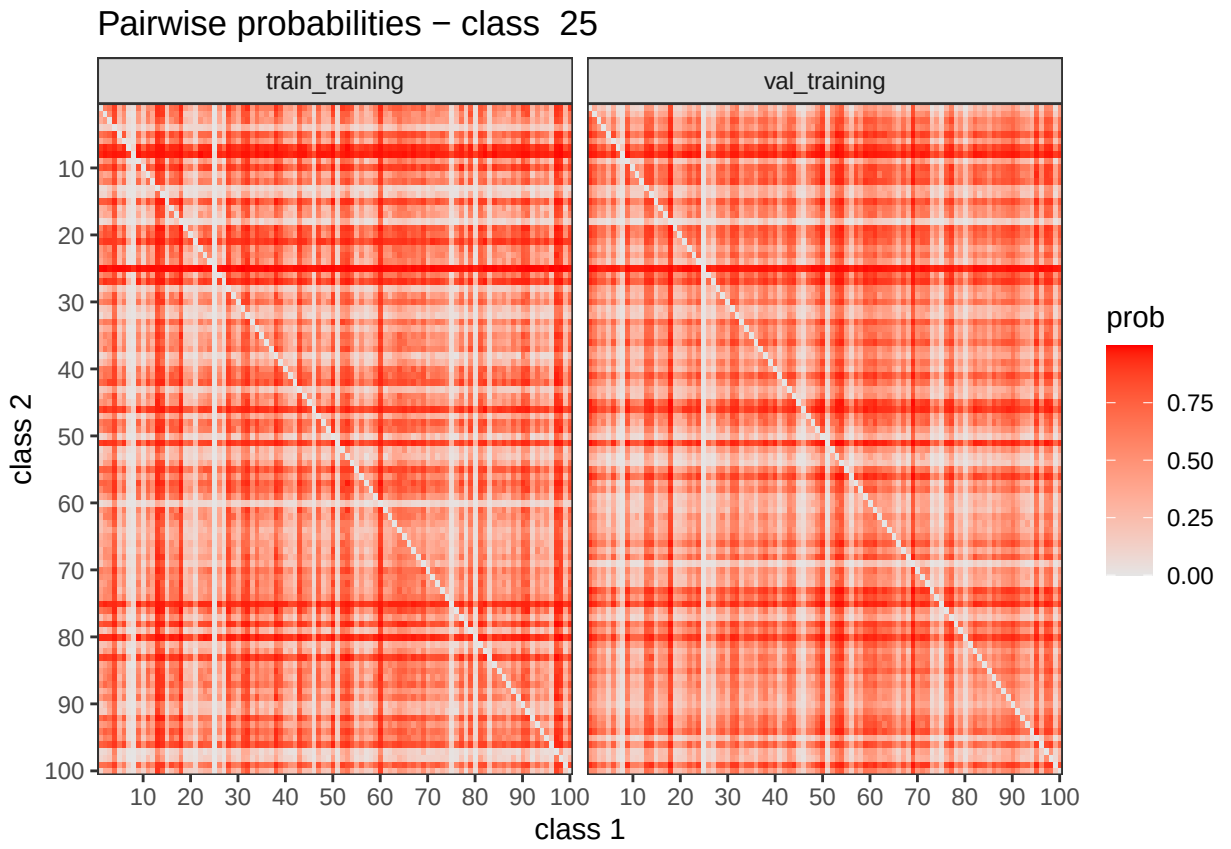

Pairwise probabilities − class 20
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

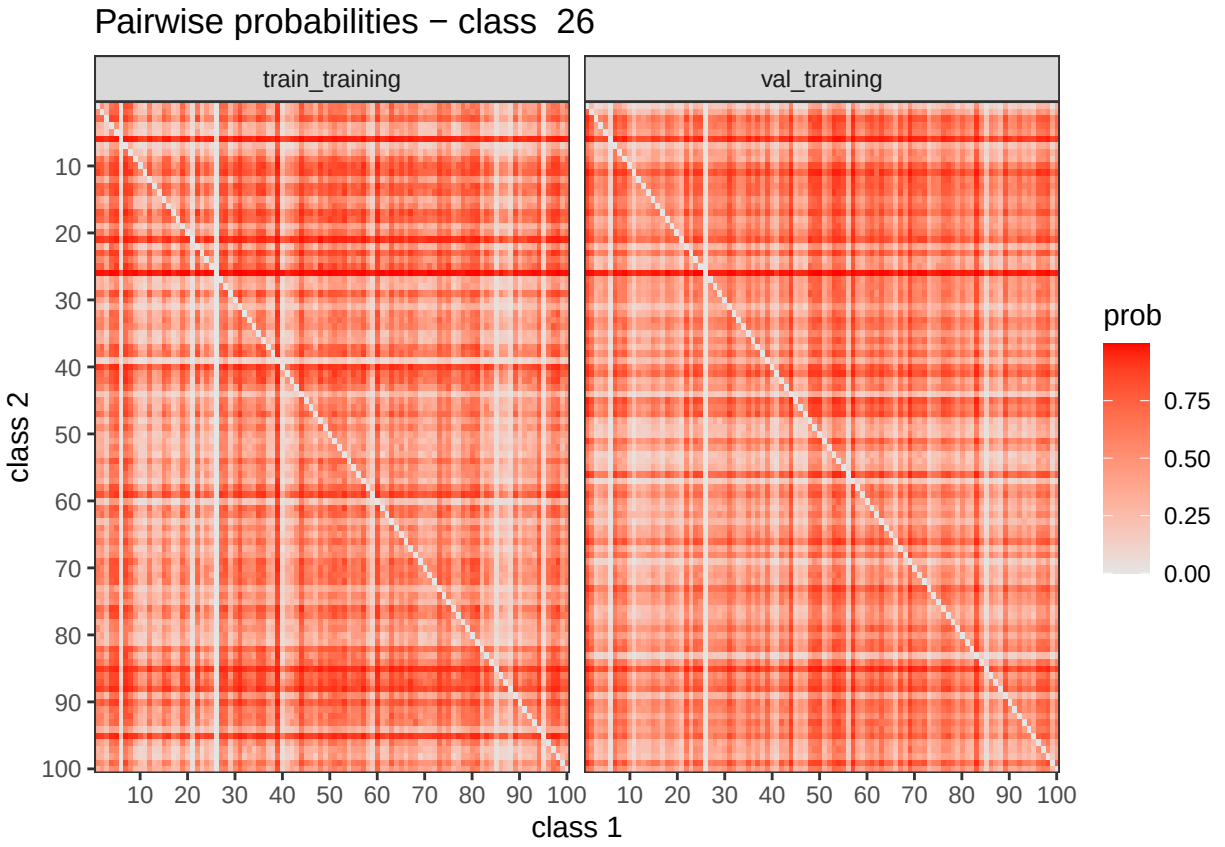

Pairwise probabilities − class 21
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

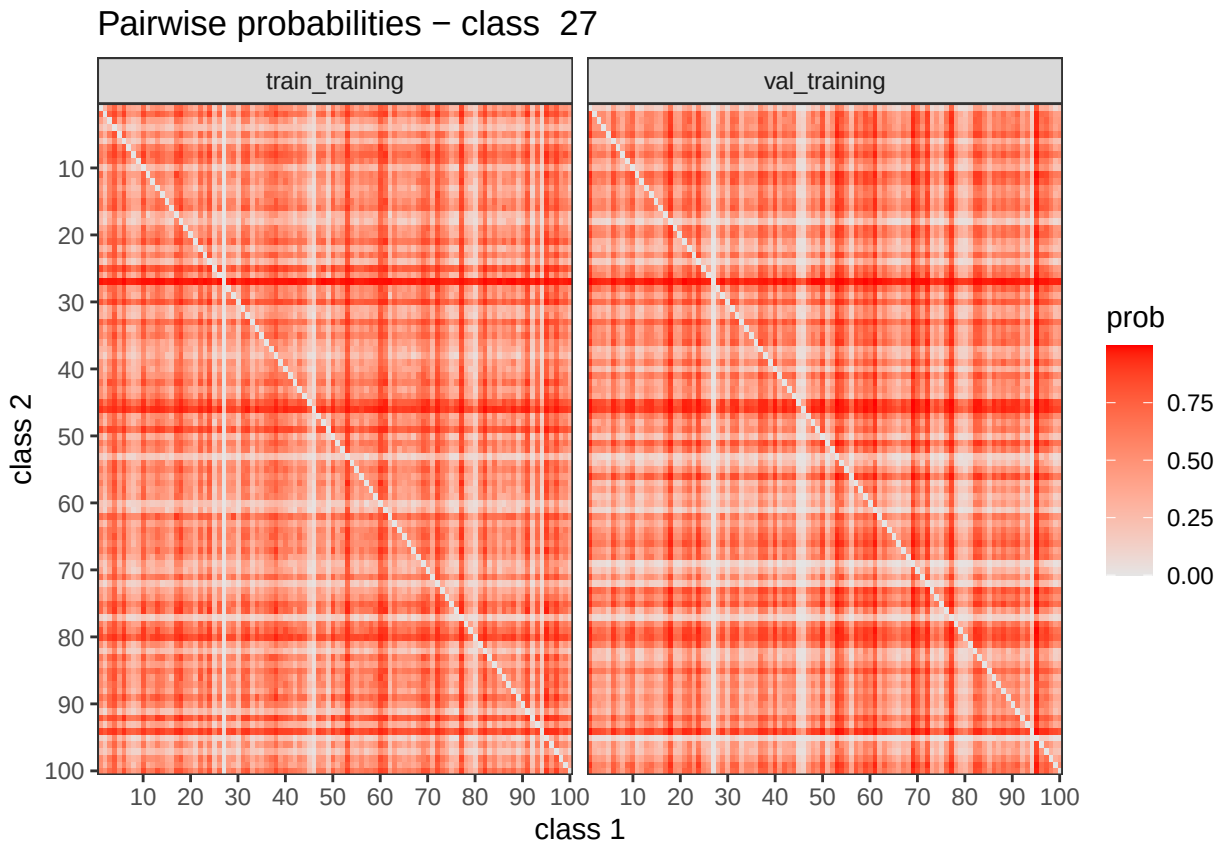

Pairwise probabilities − class 22
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

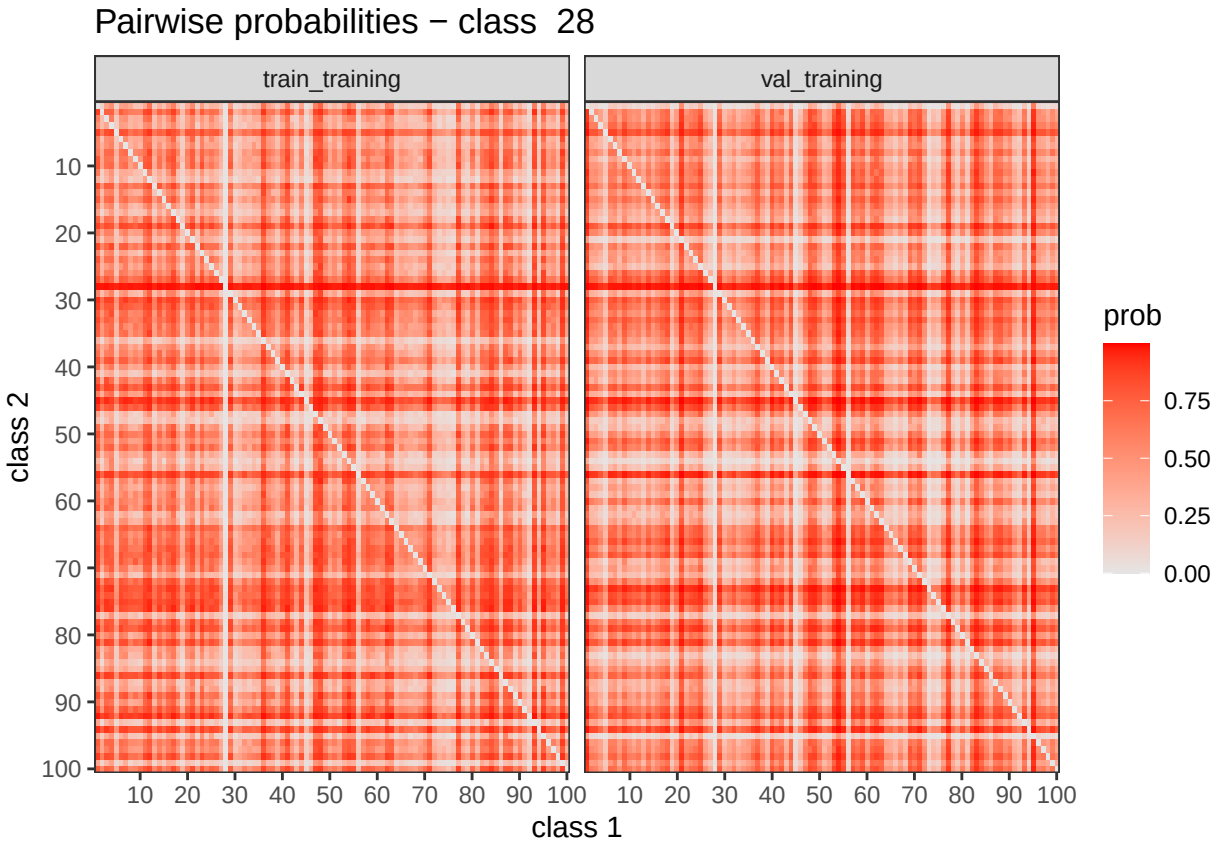

Pairwise probabilities − class 23
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

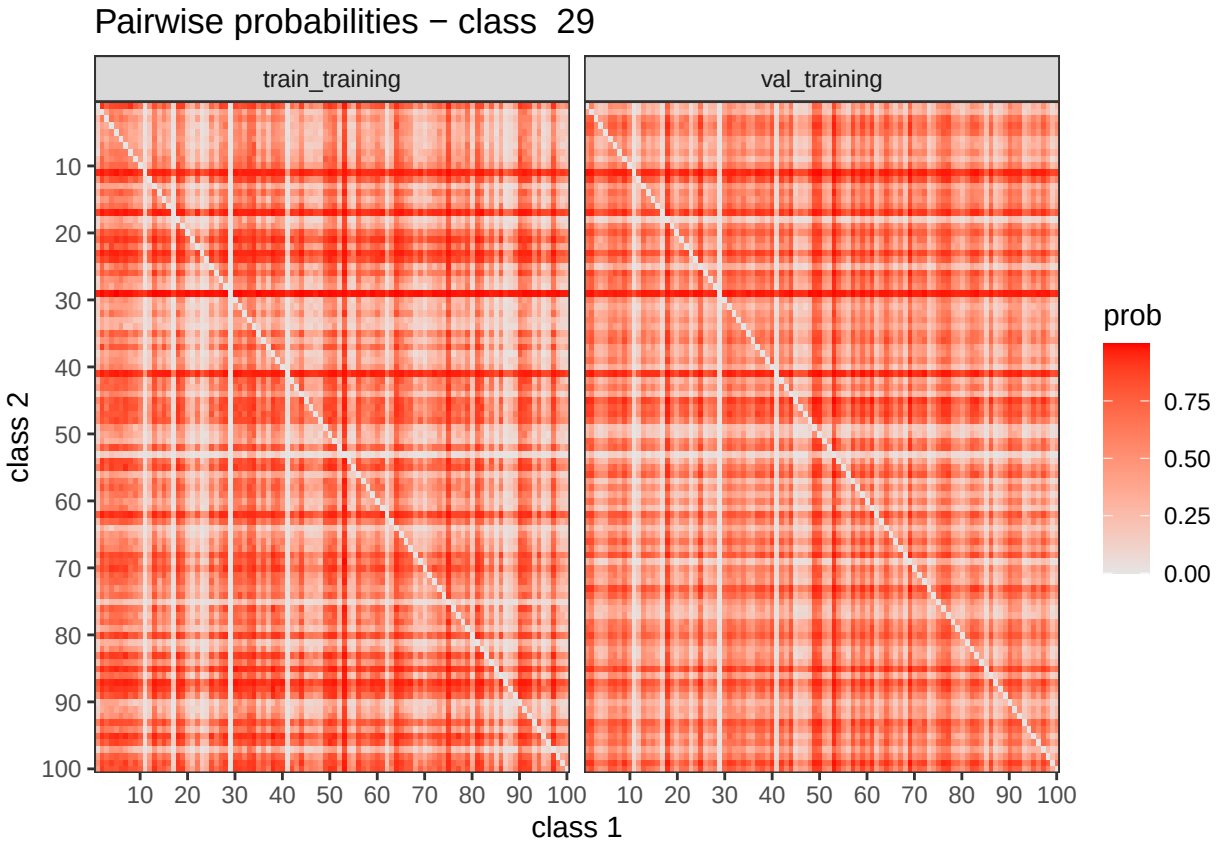

Pairwise probabilities − class 24
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

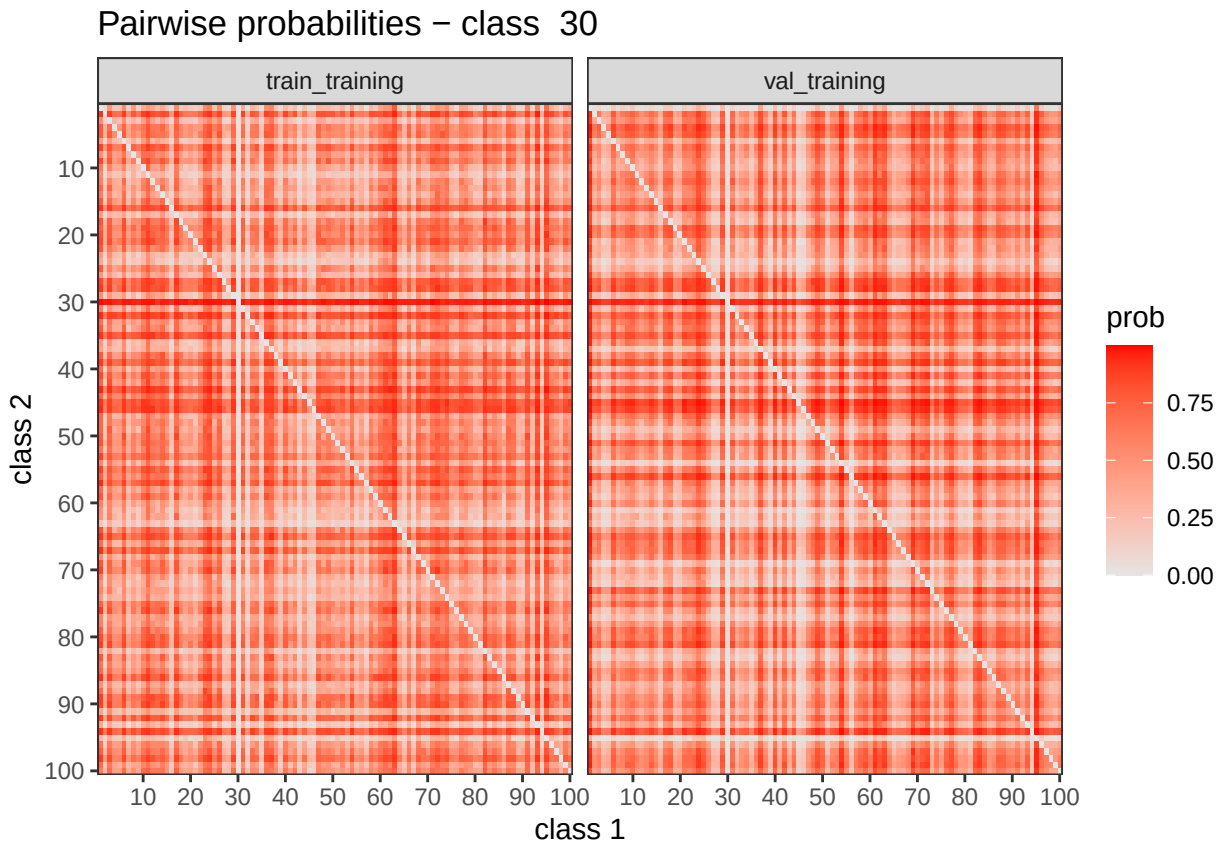

Pairwise probabilities − class 25
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

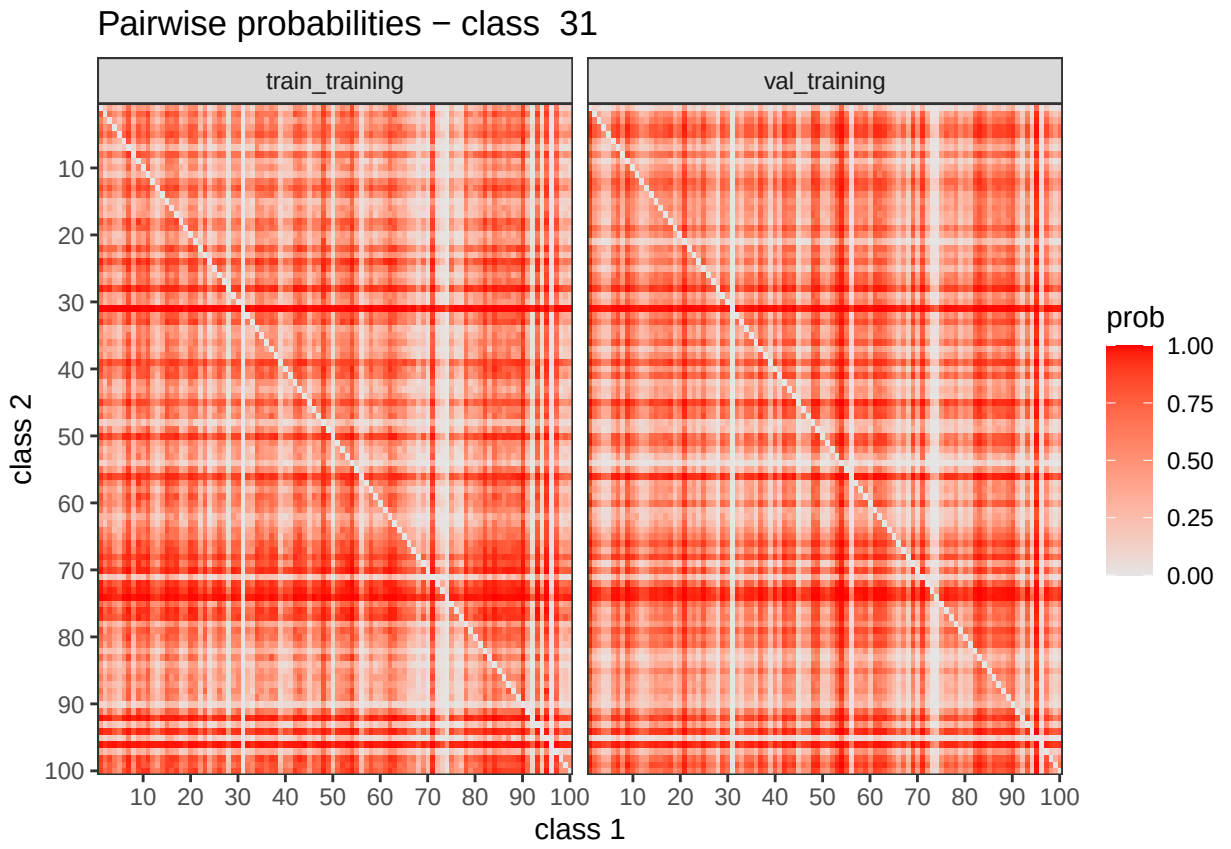

Pairwise probabilities − class 26
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

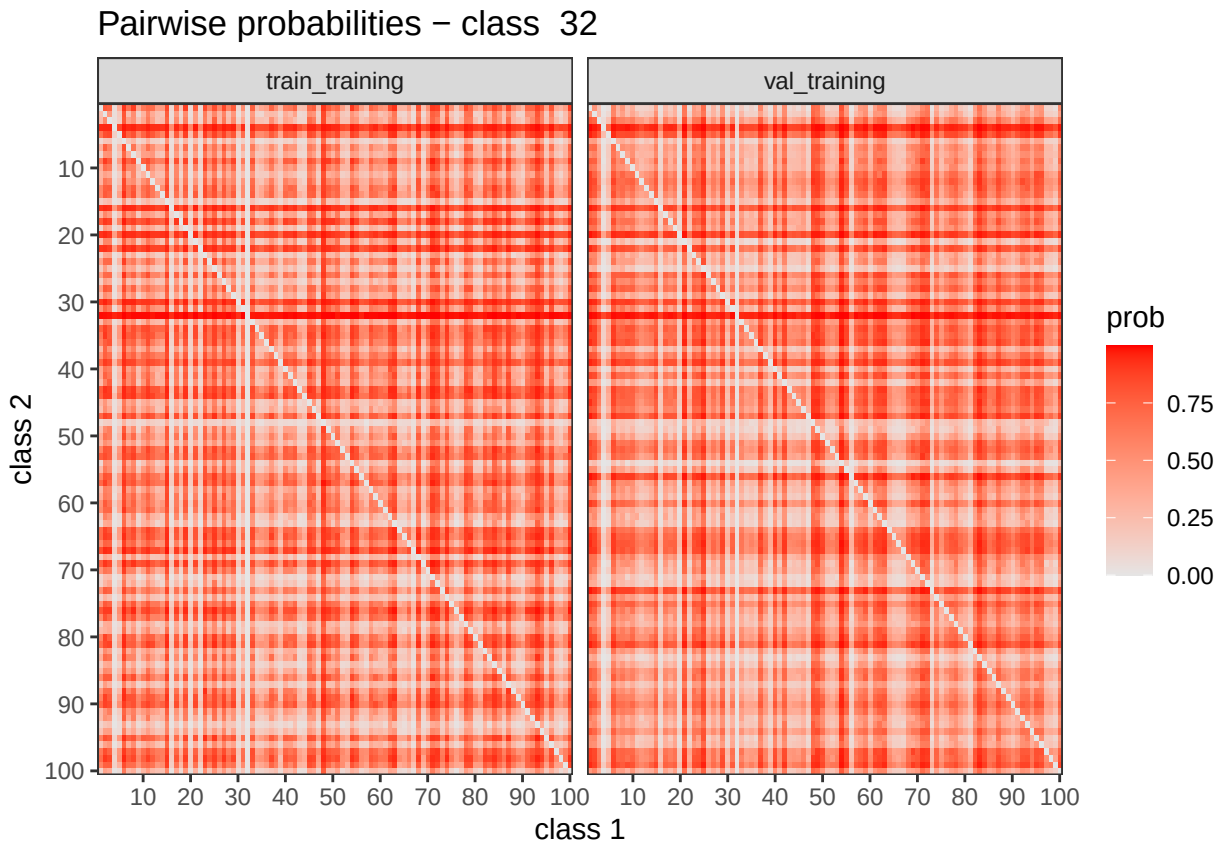

Pairwise probabilities − class 27
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

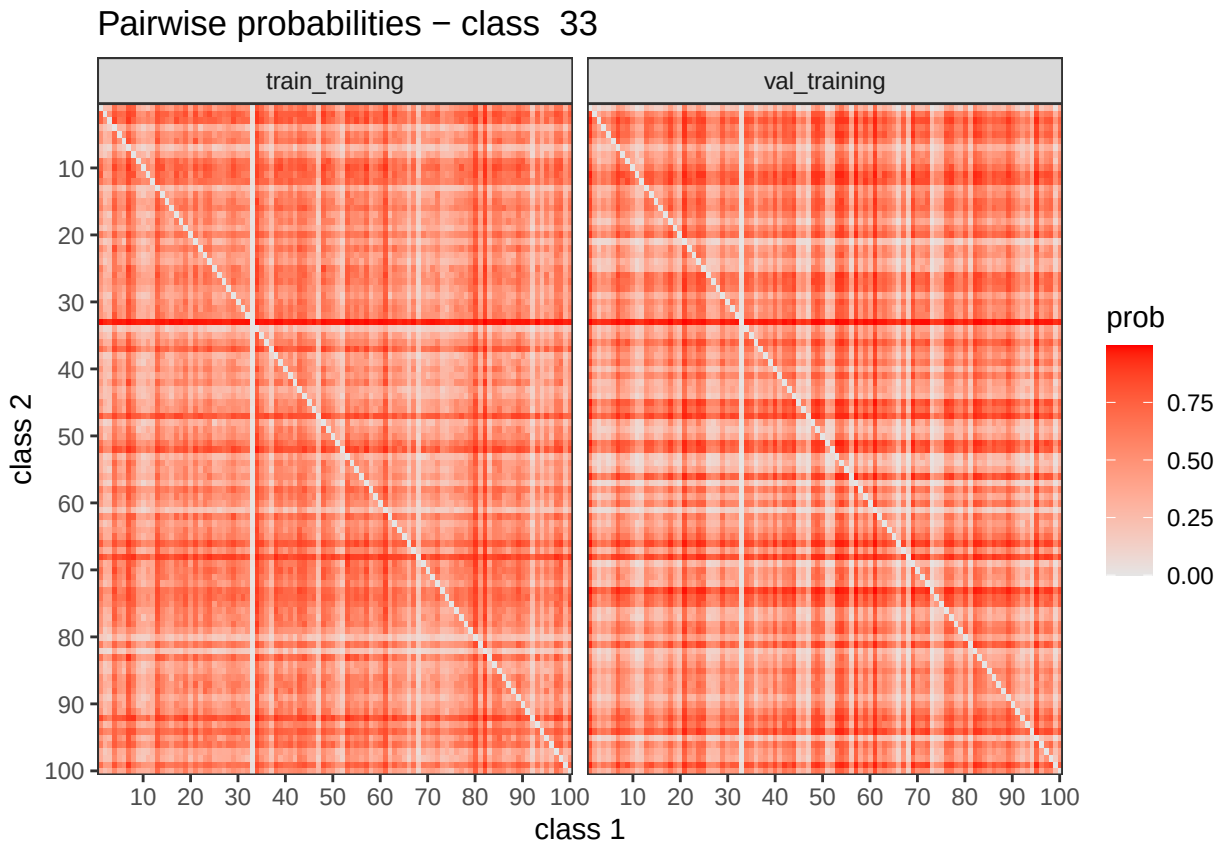

Pairwise probabilities − class 28
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

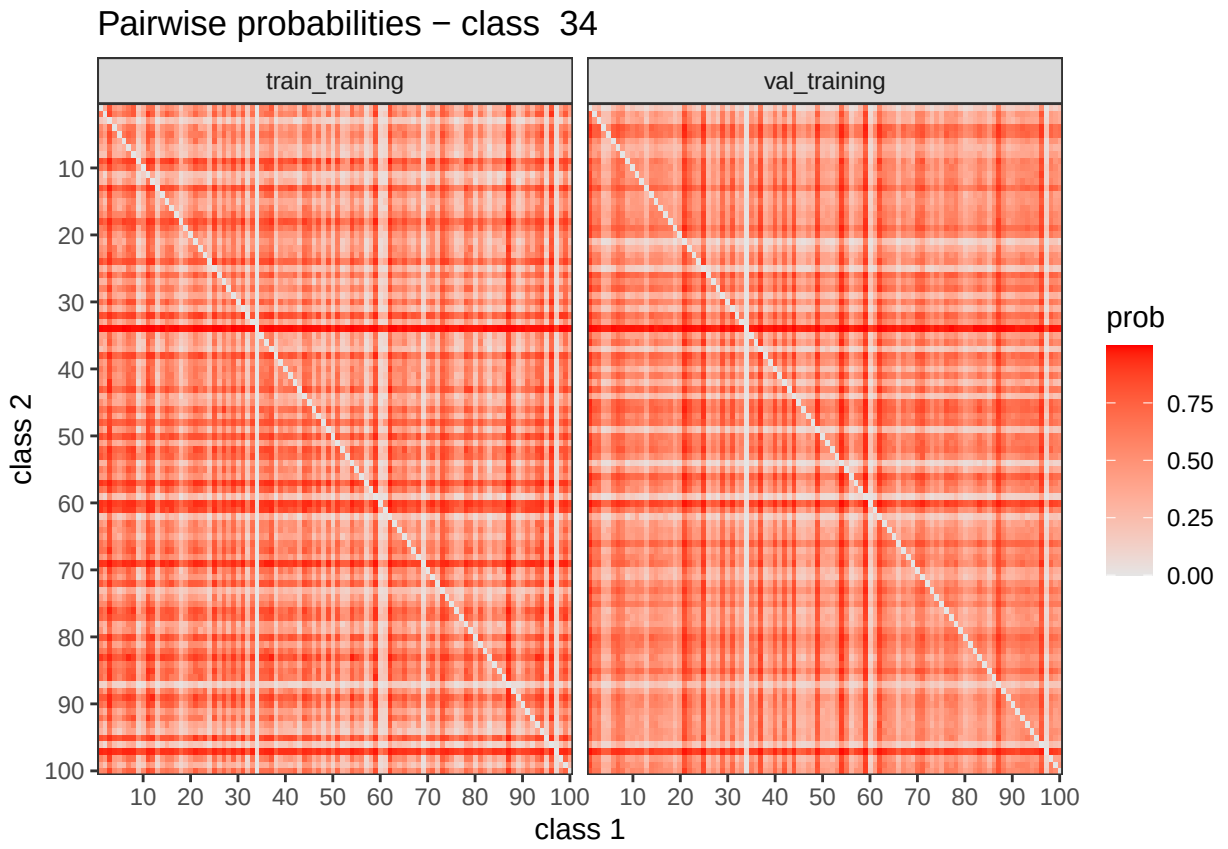

Pairwise probabilities − class 29
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

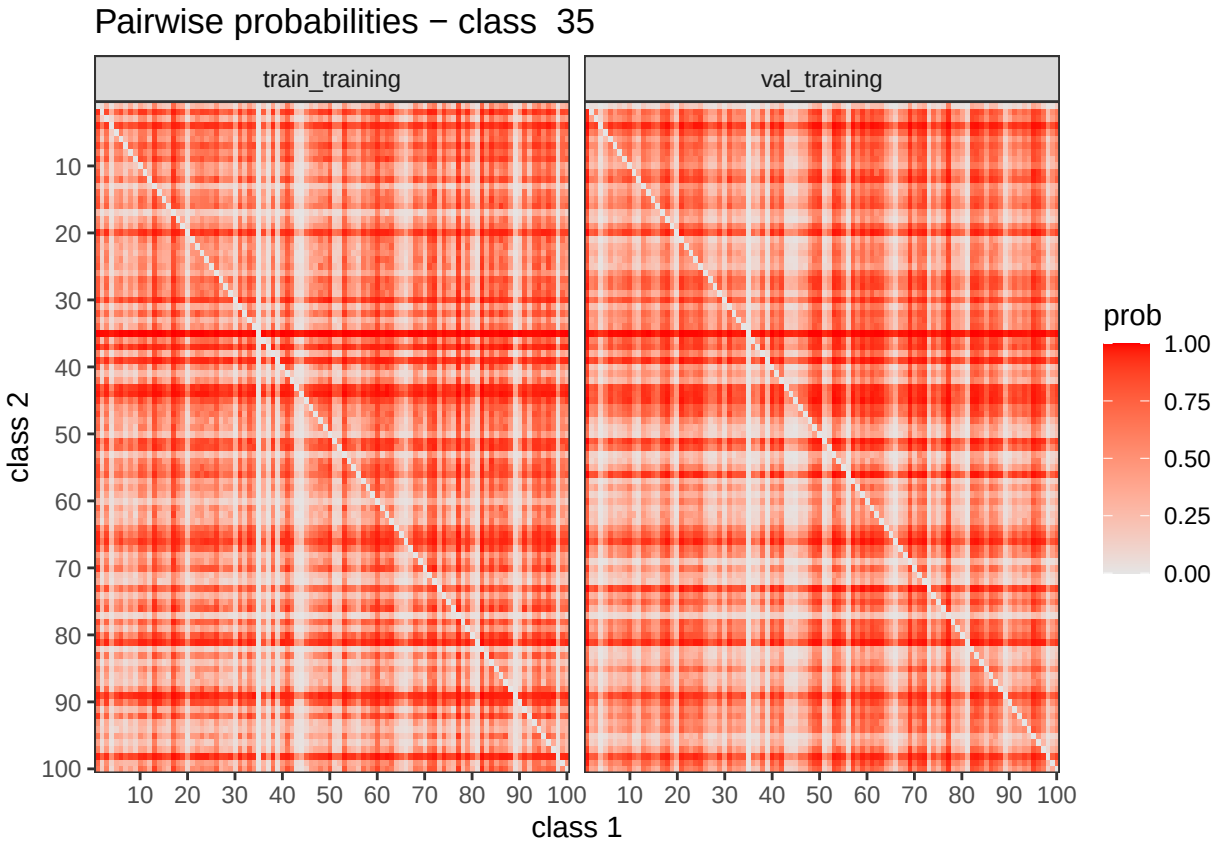

Pairwise probabilities − class 30
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

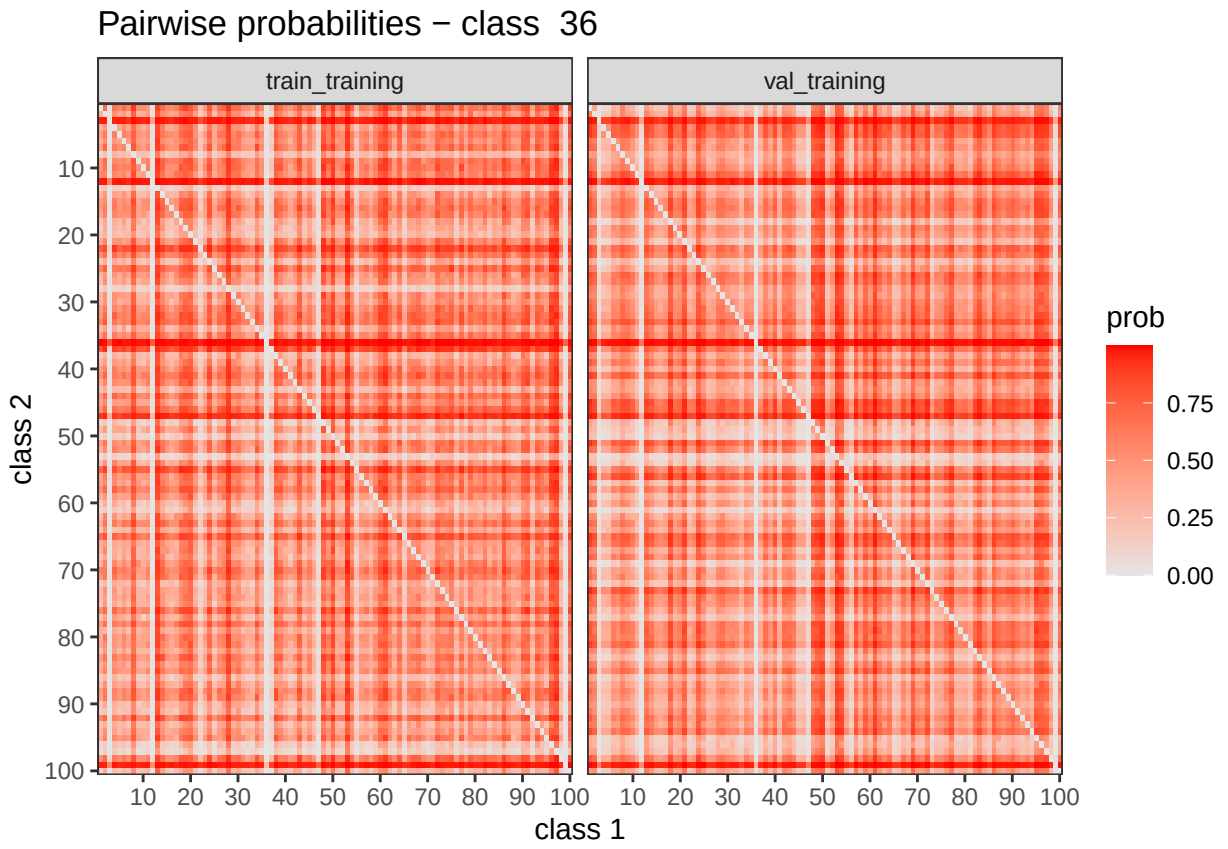

Pairwise probabilities − class 31
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

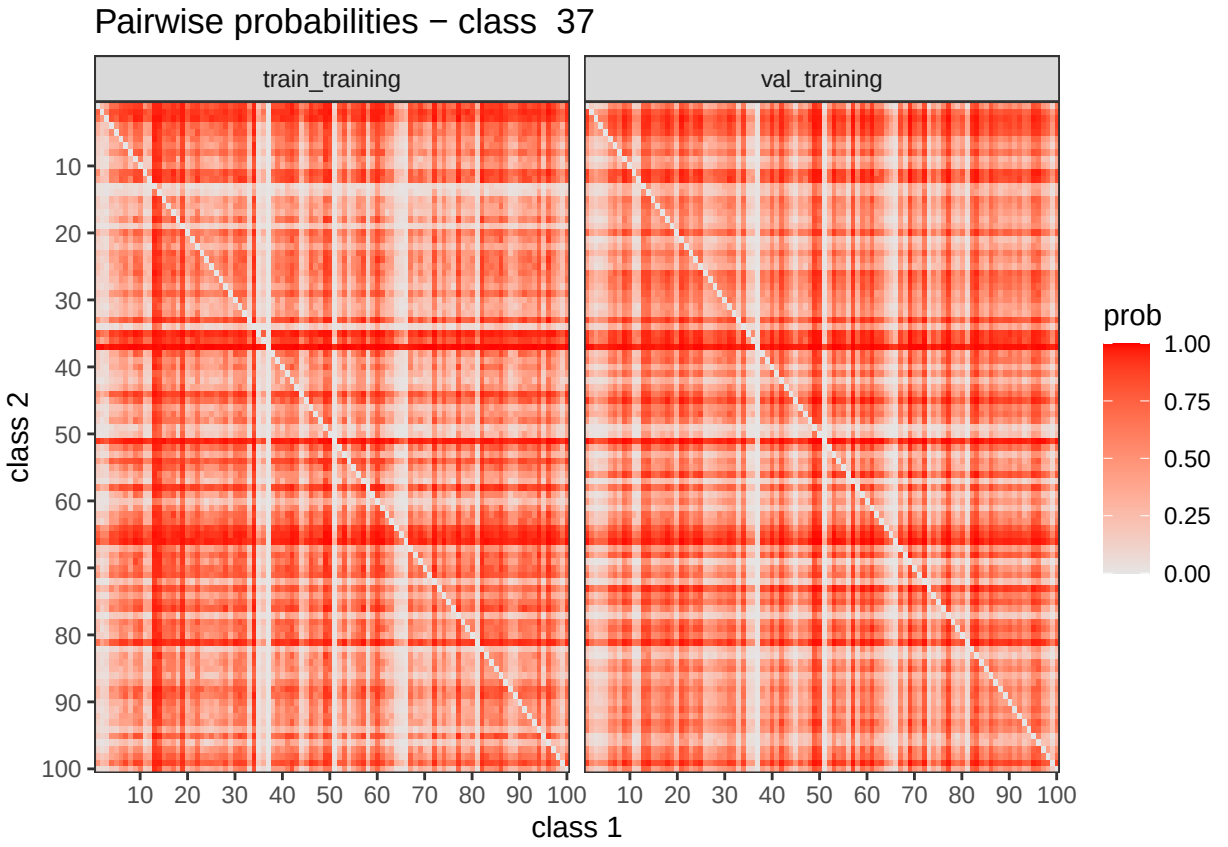

Pairwise probabilities − class 32
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

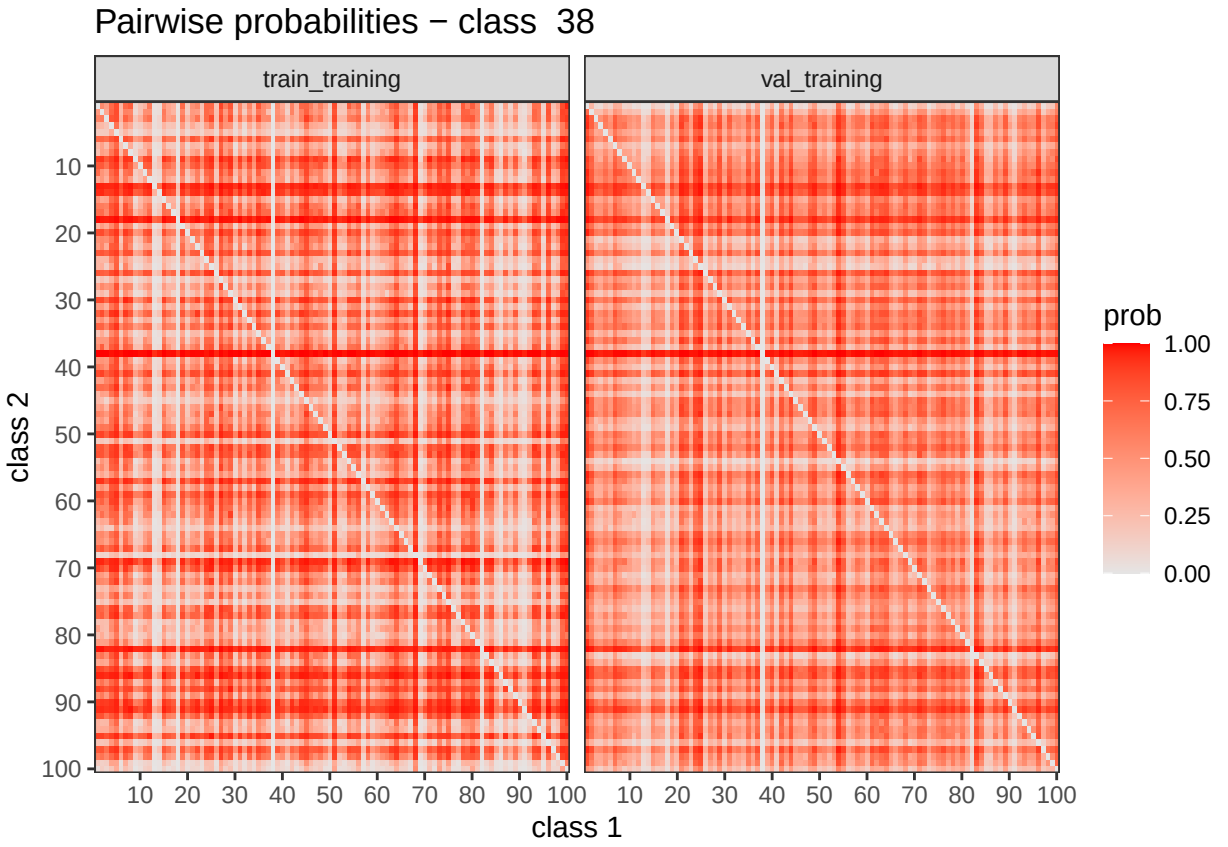

Pairwise probabilities − class 33
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

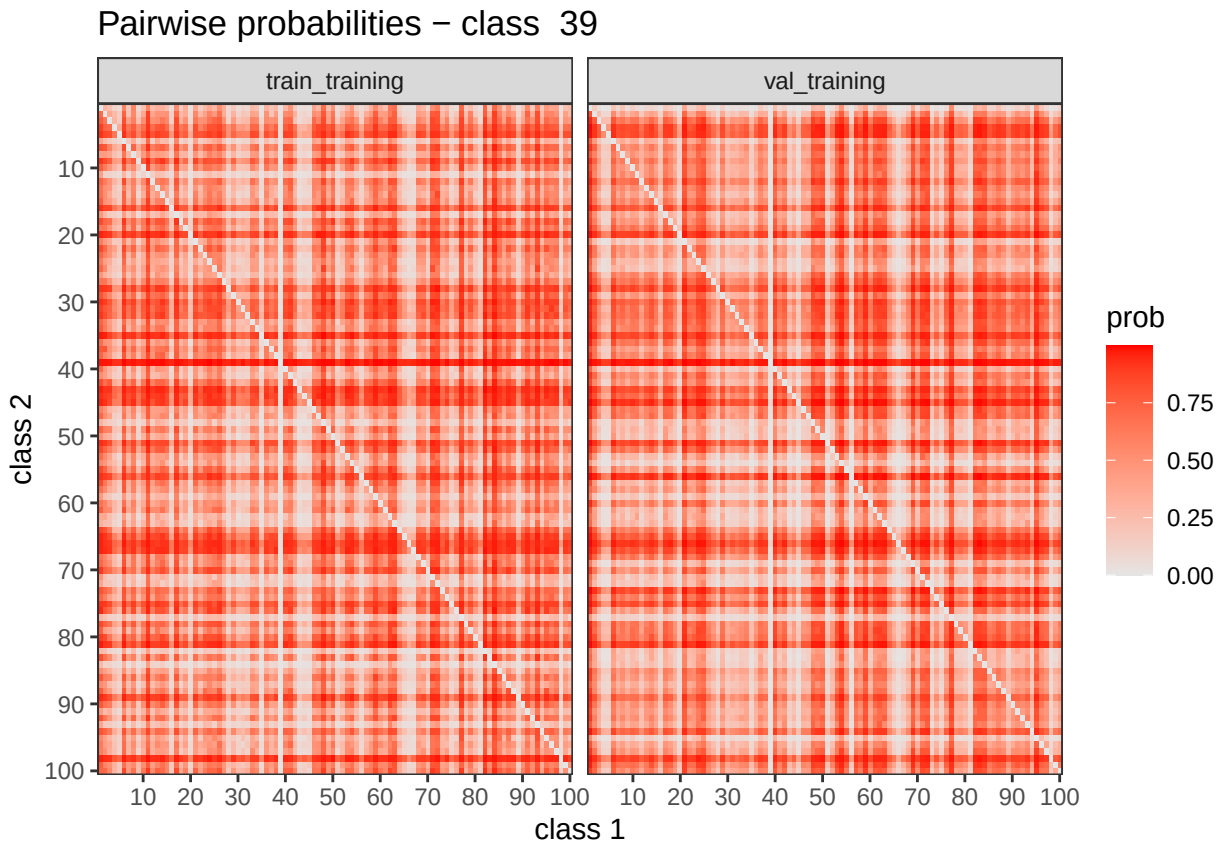

Pairwise probabilities − class 34
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

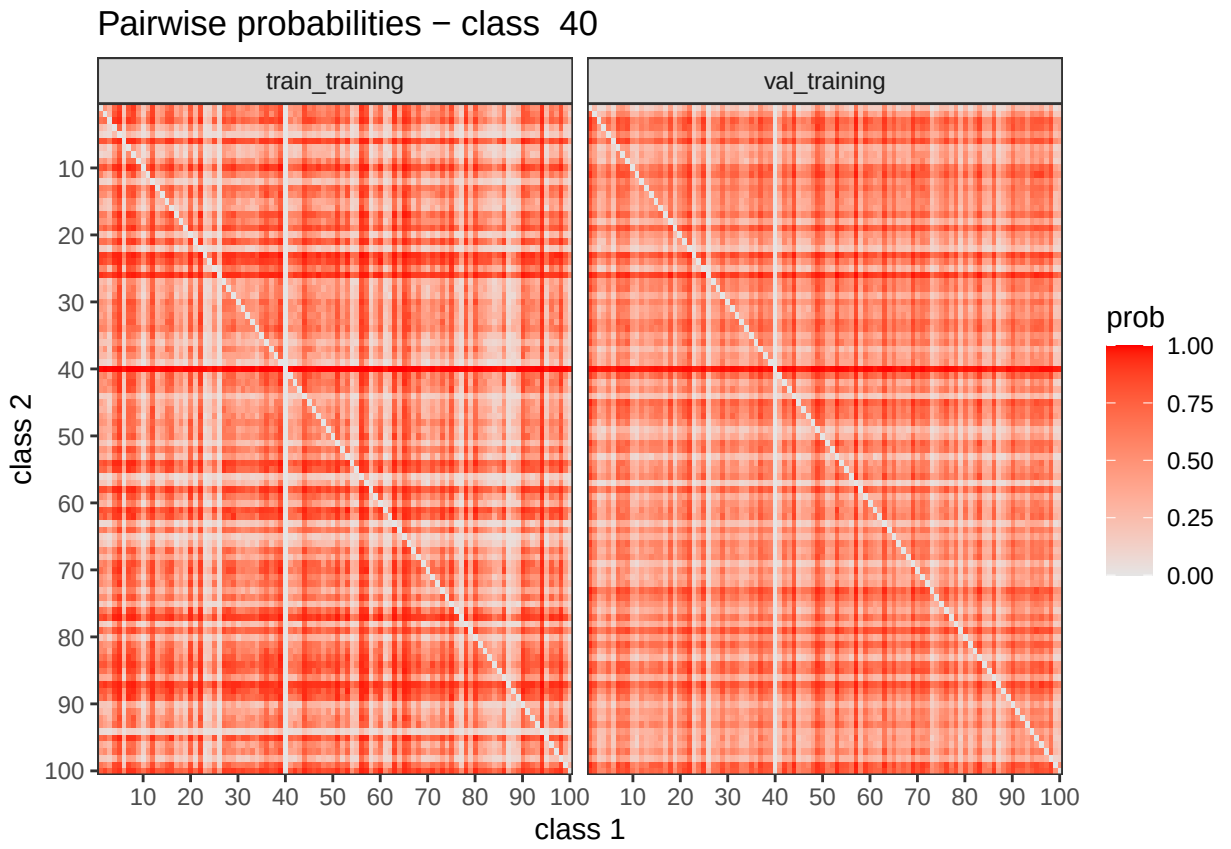

Pairwise probabilities − class 35
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

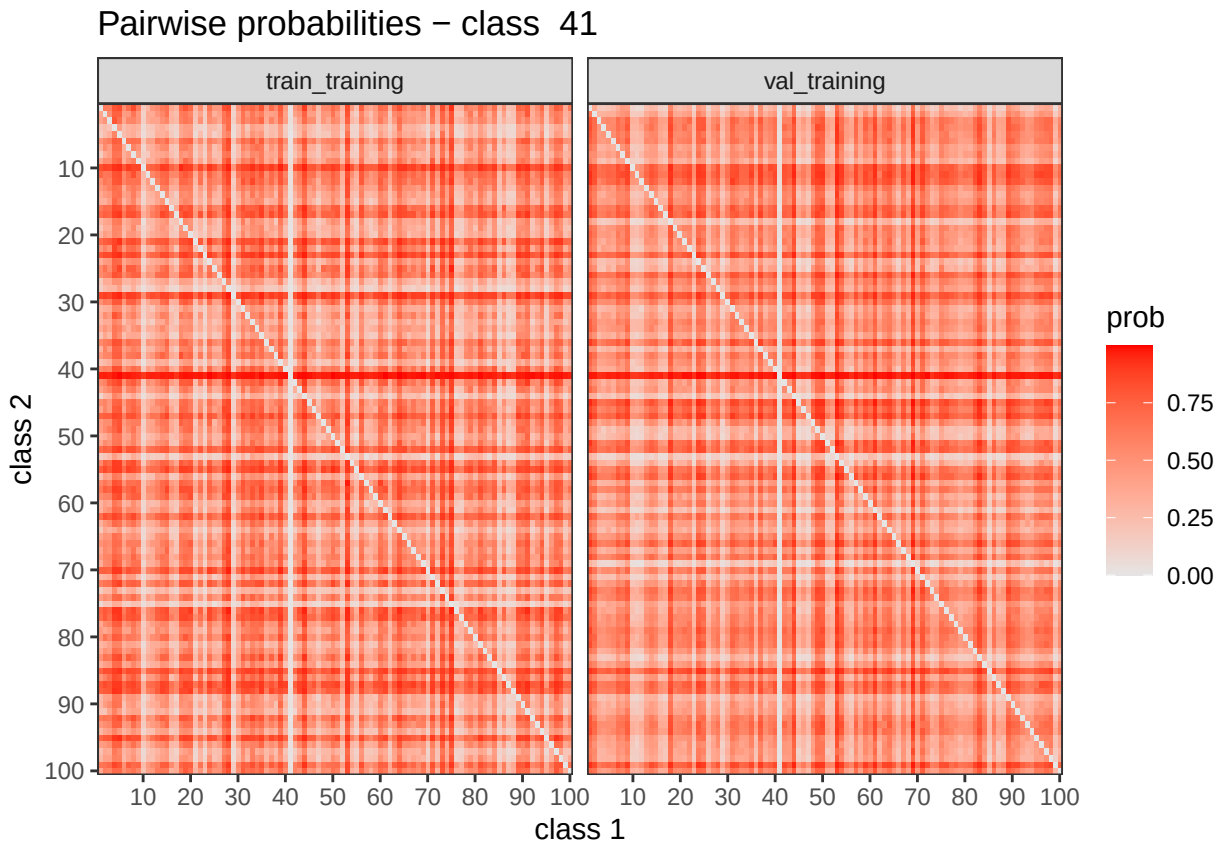

Pairwise probabilities − class 36
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

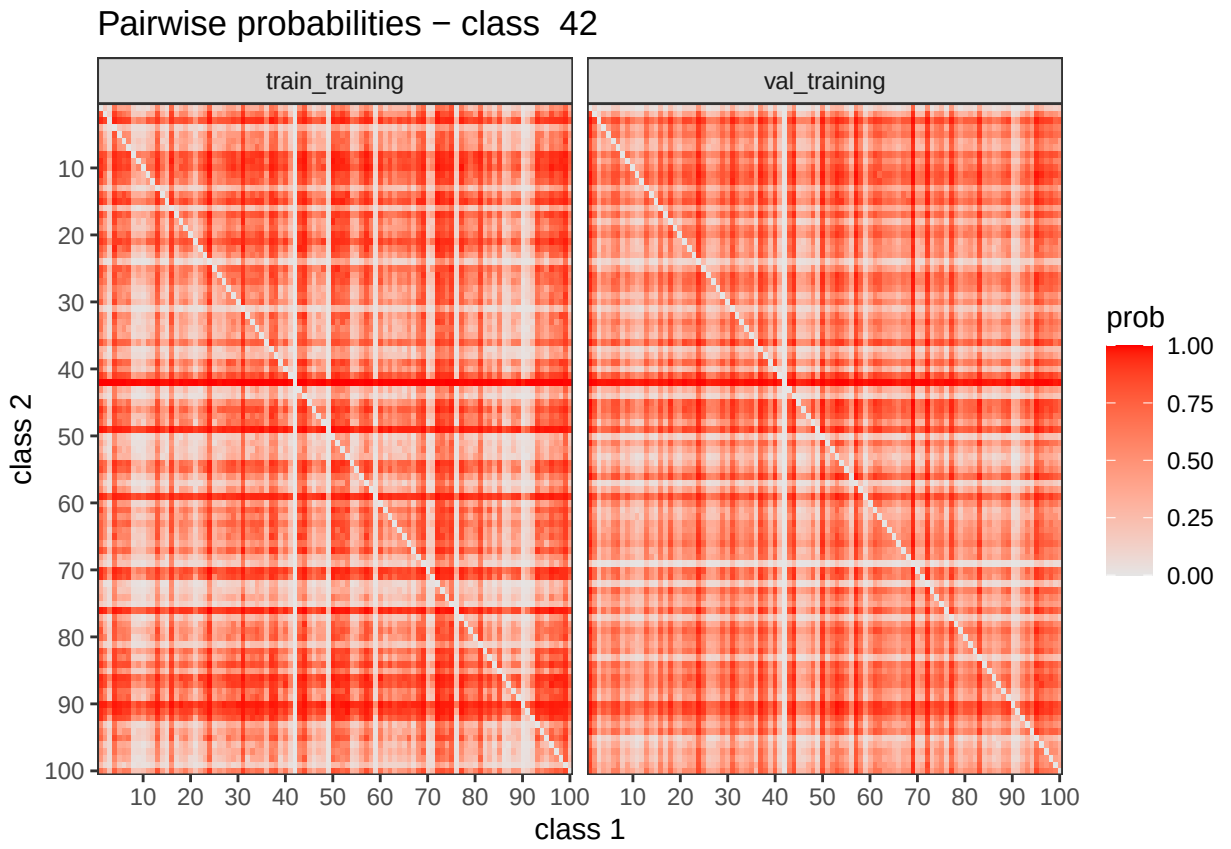

Pairwise probabilities − class 37
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

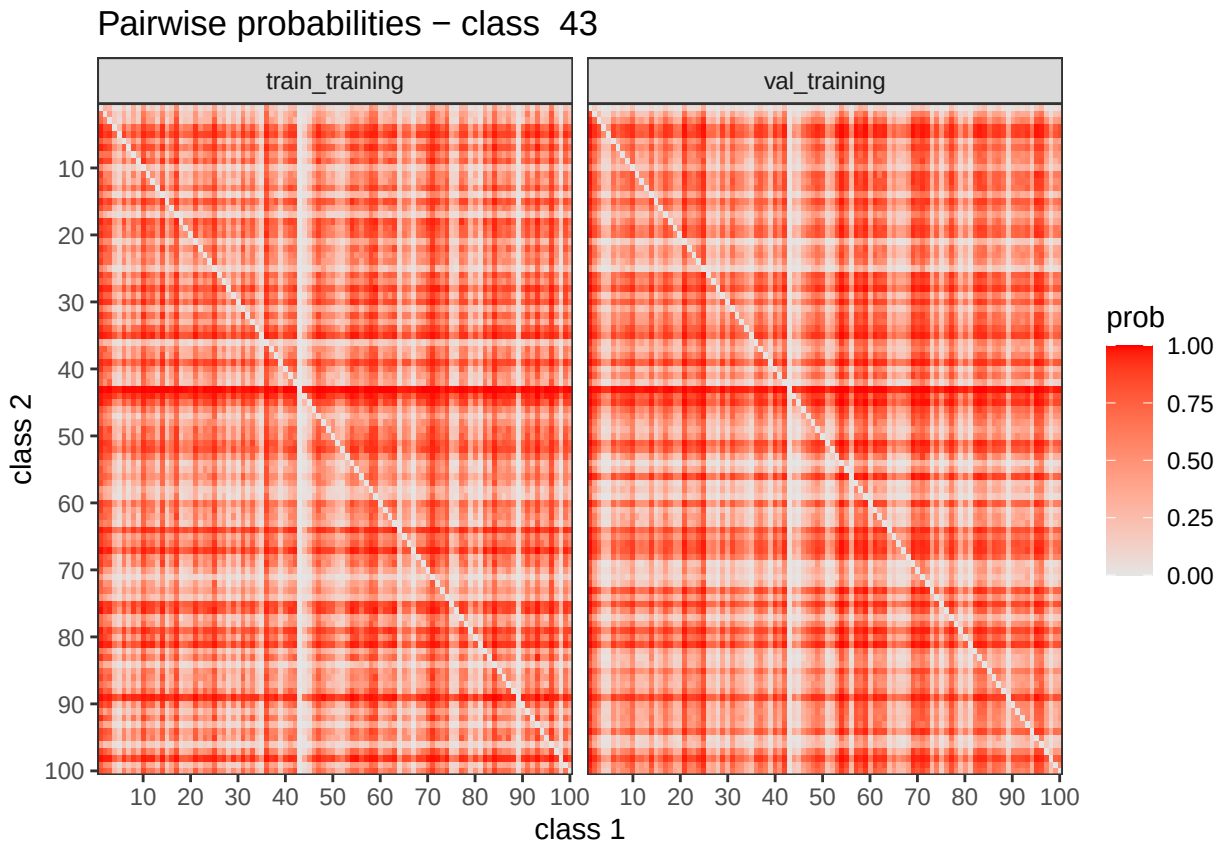

Pairwise probabilities − class 38
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

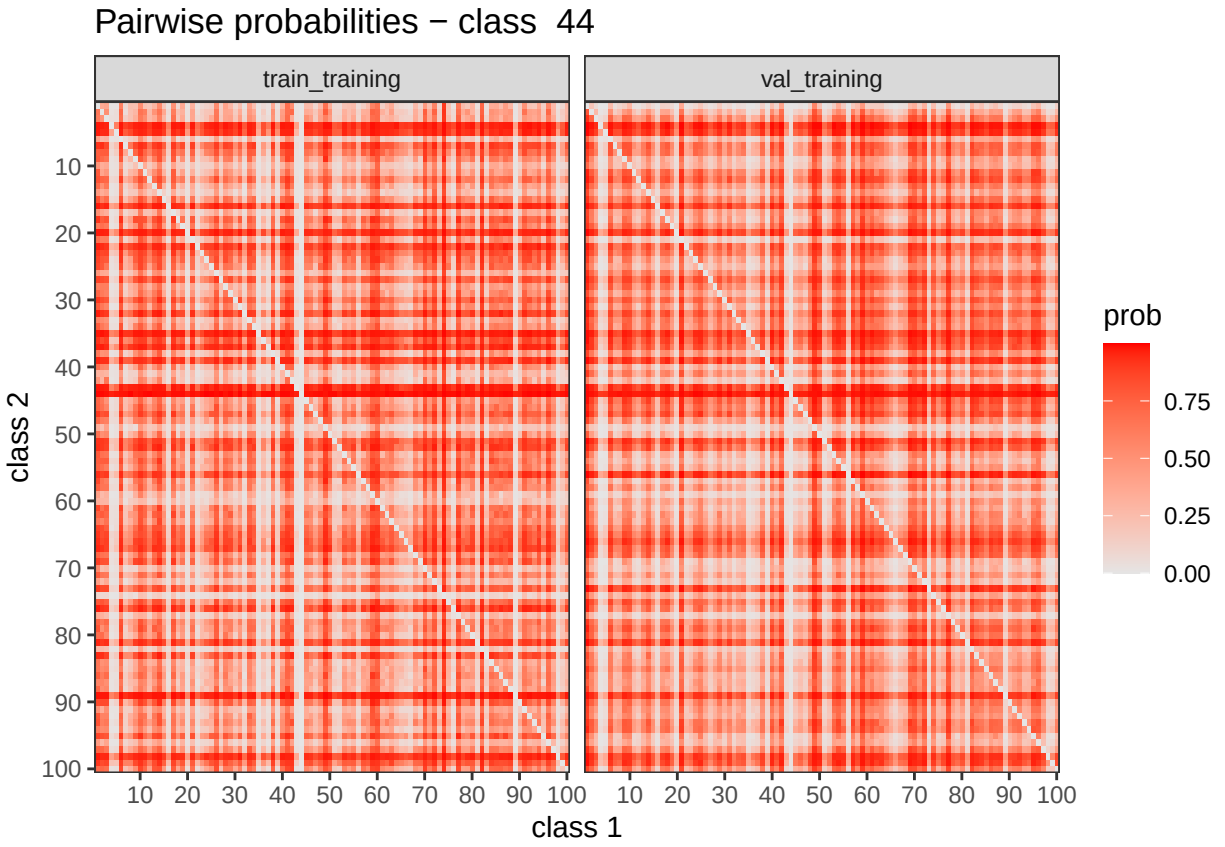

Pairwise probabilities − class 39
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

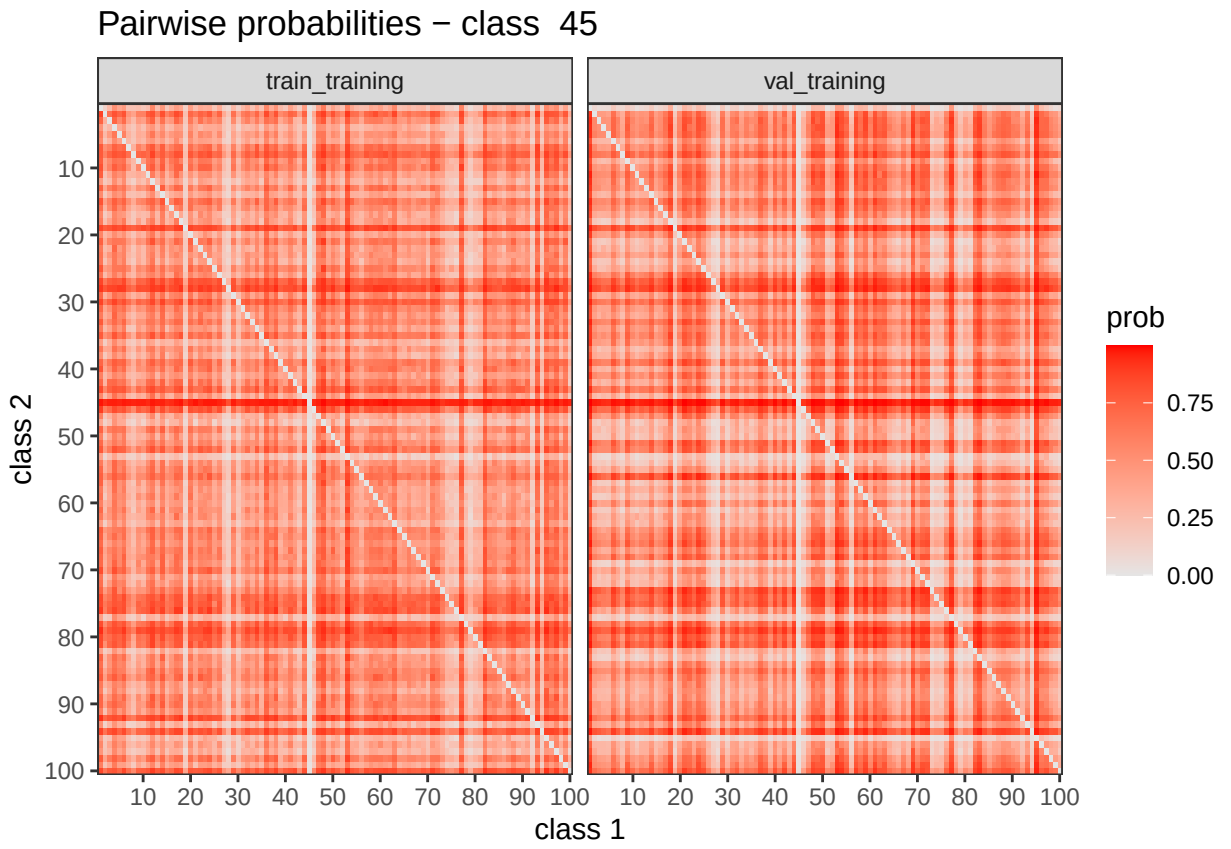

Pairwise probabilities − class 40
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

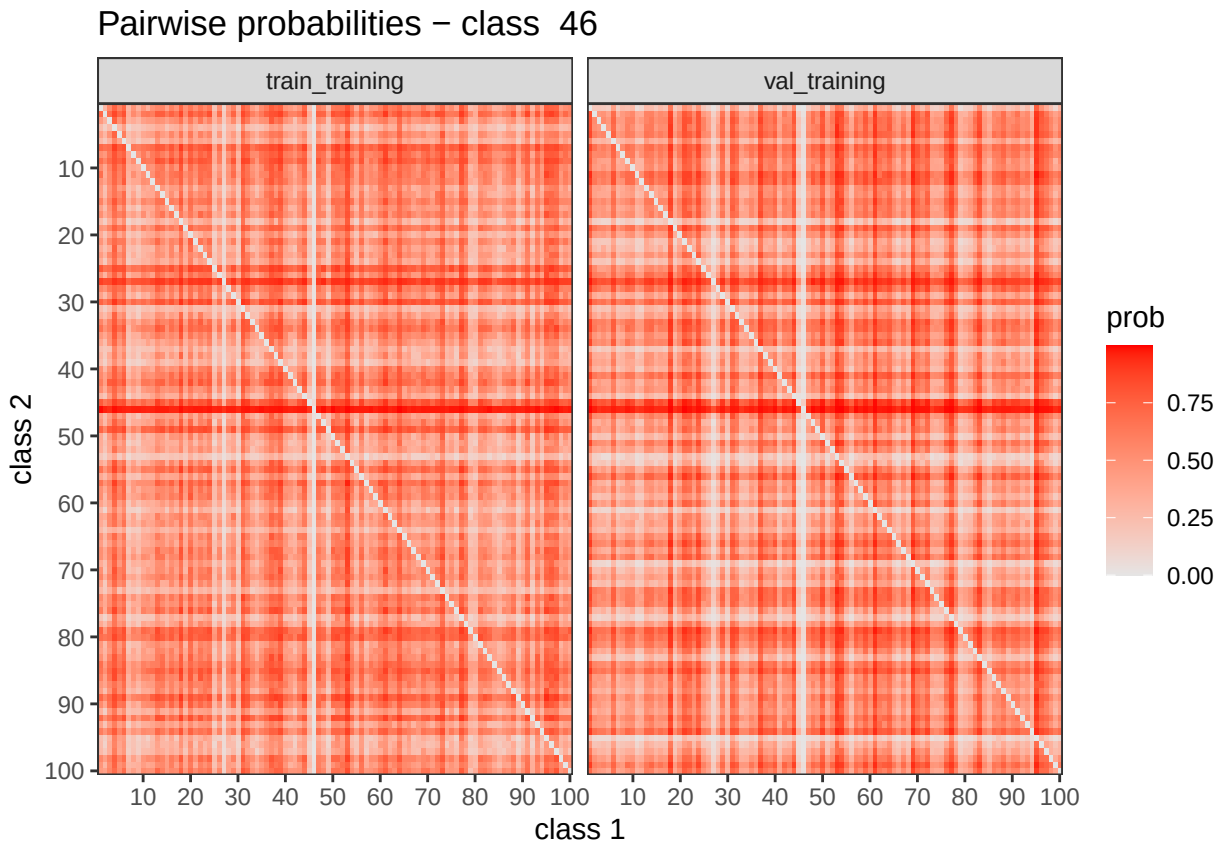

Pairwise probabilities − class 41
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

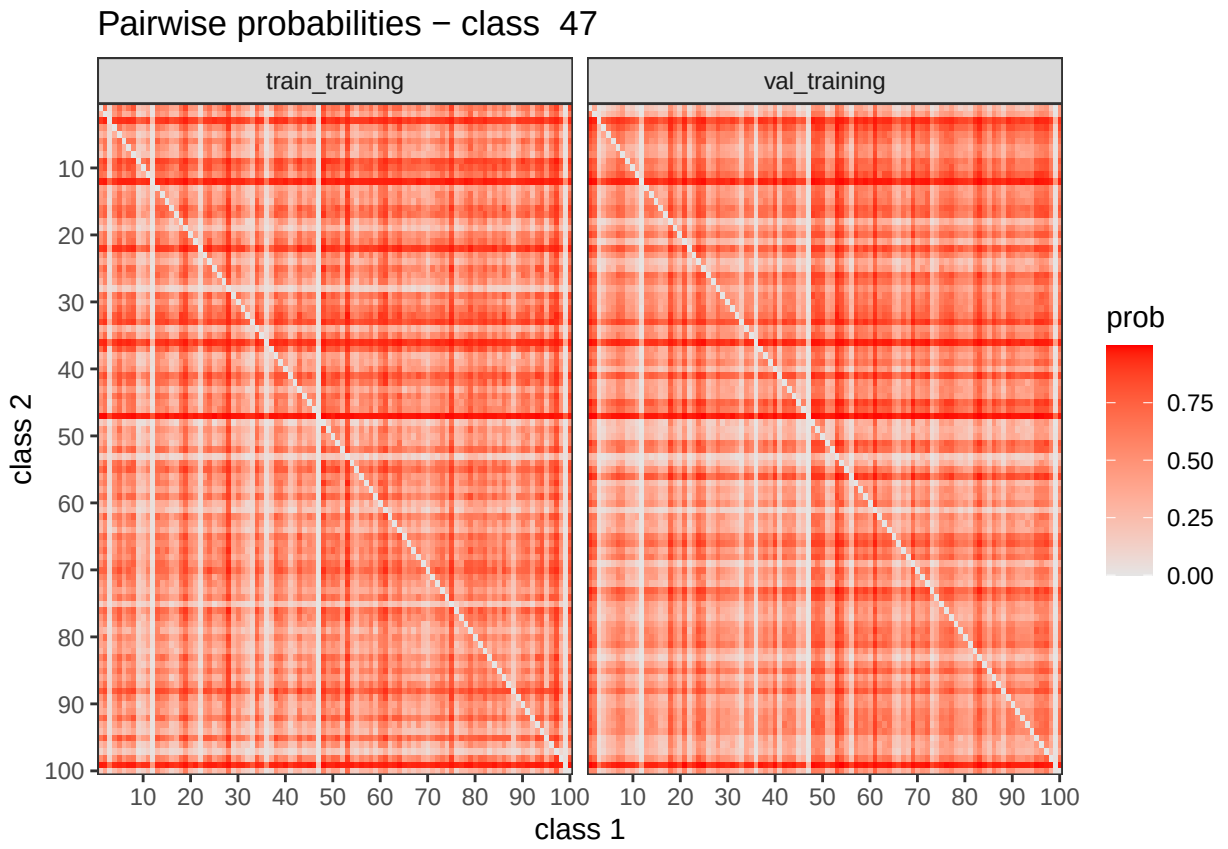

Pairwise probabilities − class 42
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

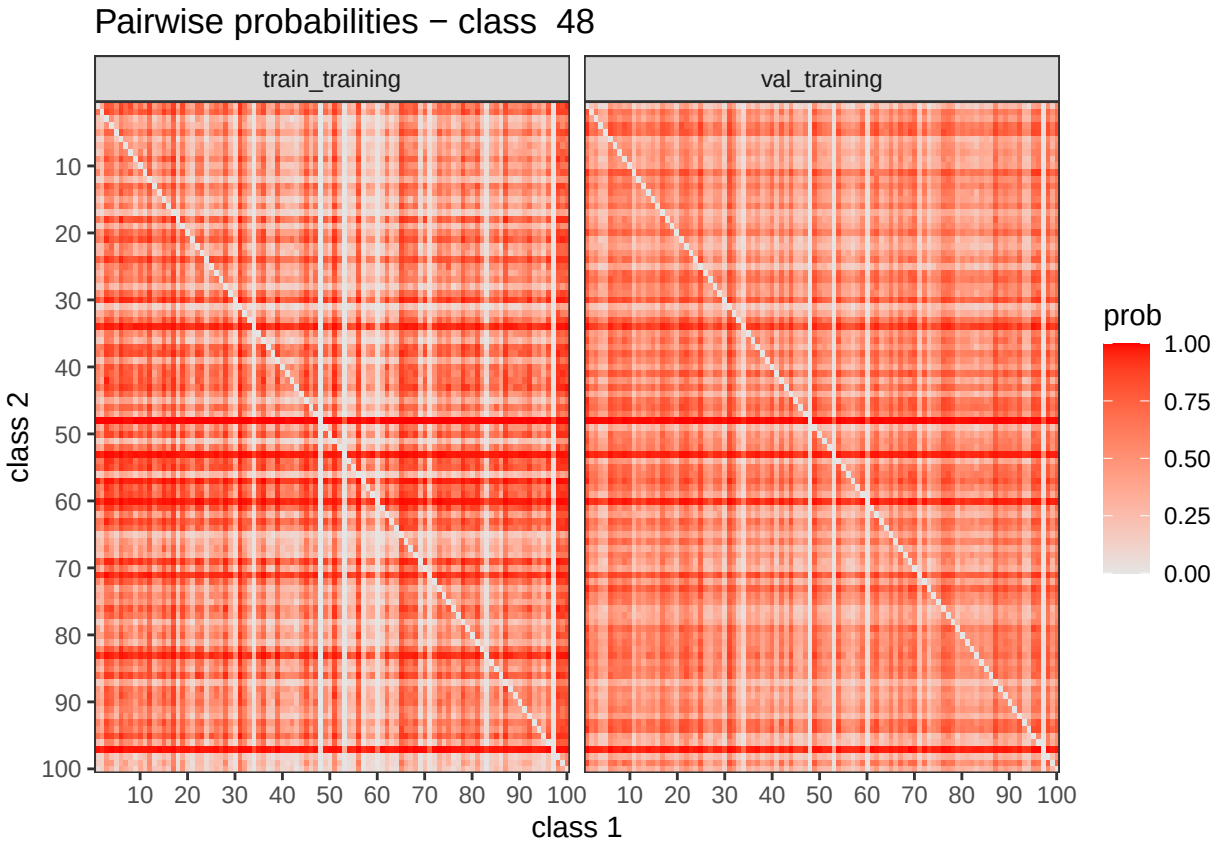

Pairwise probabilities − class 43
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

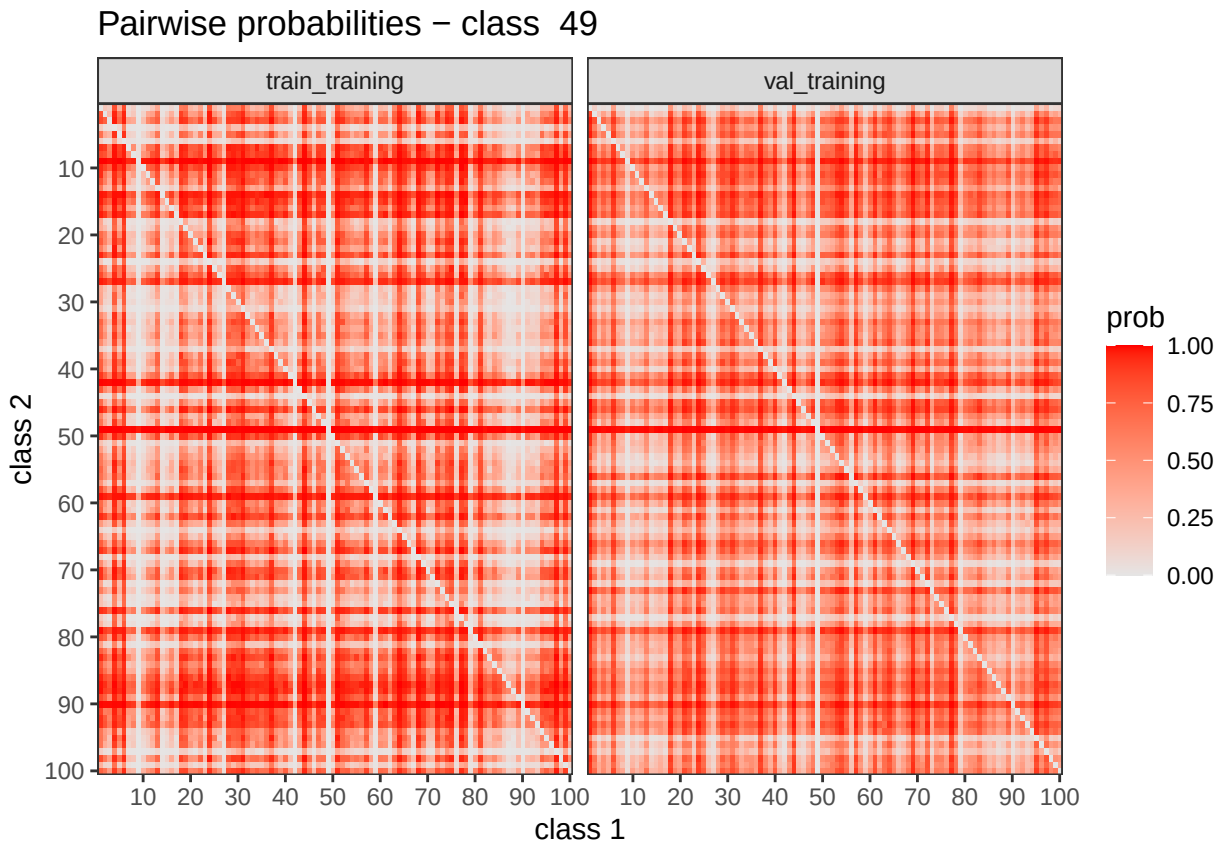

Pairwise probabilities − class 44
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

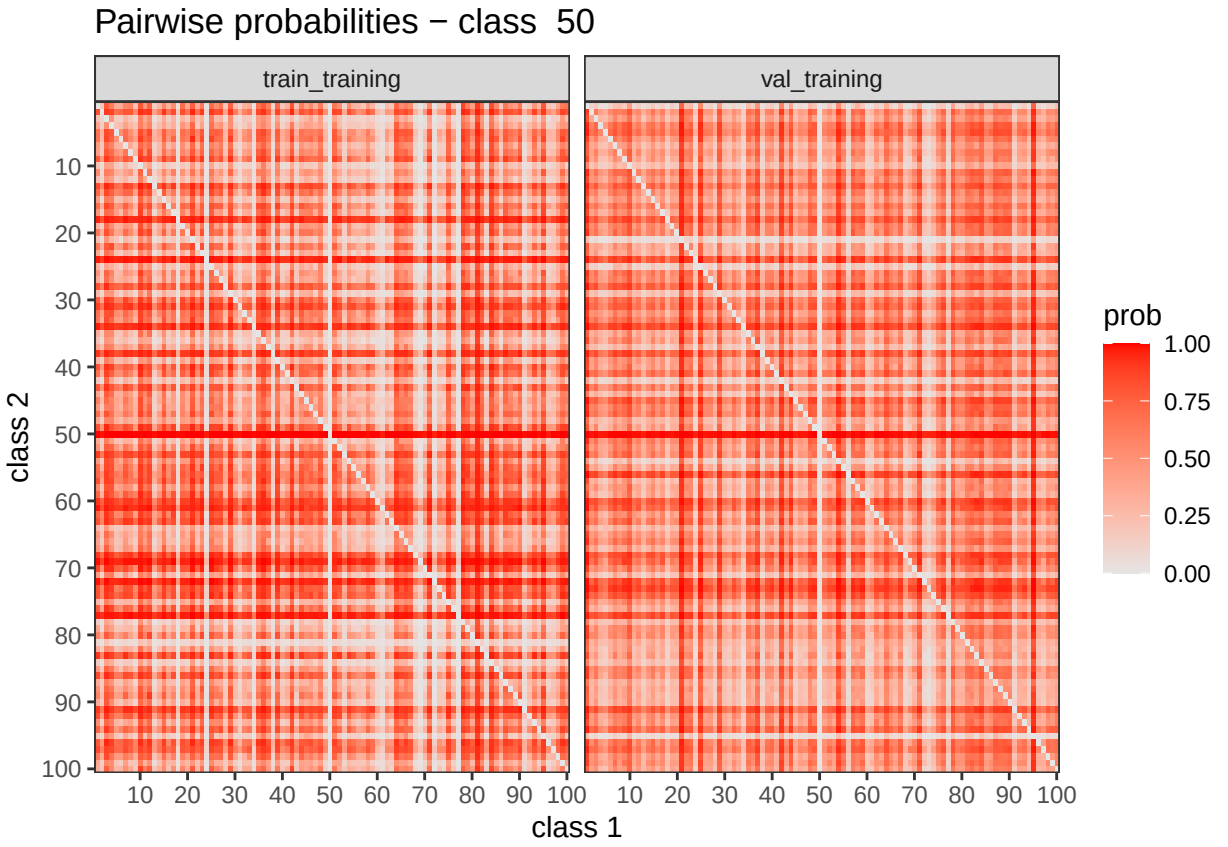

Pairwise probabilities − class 45
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

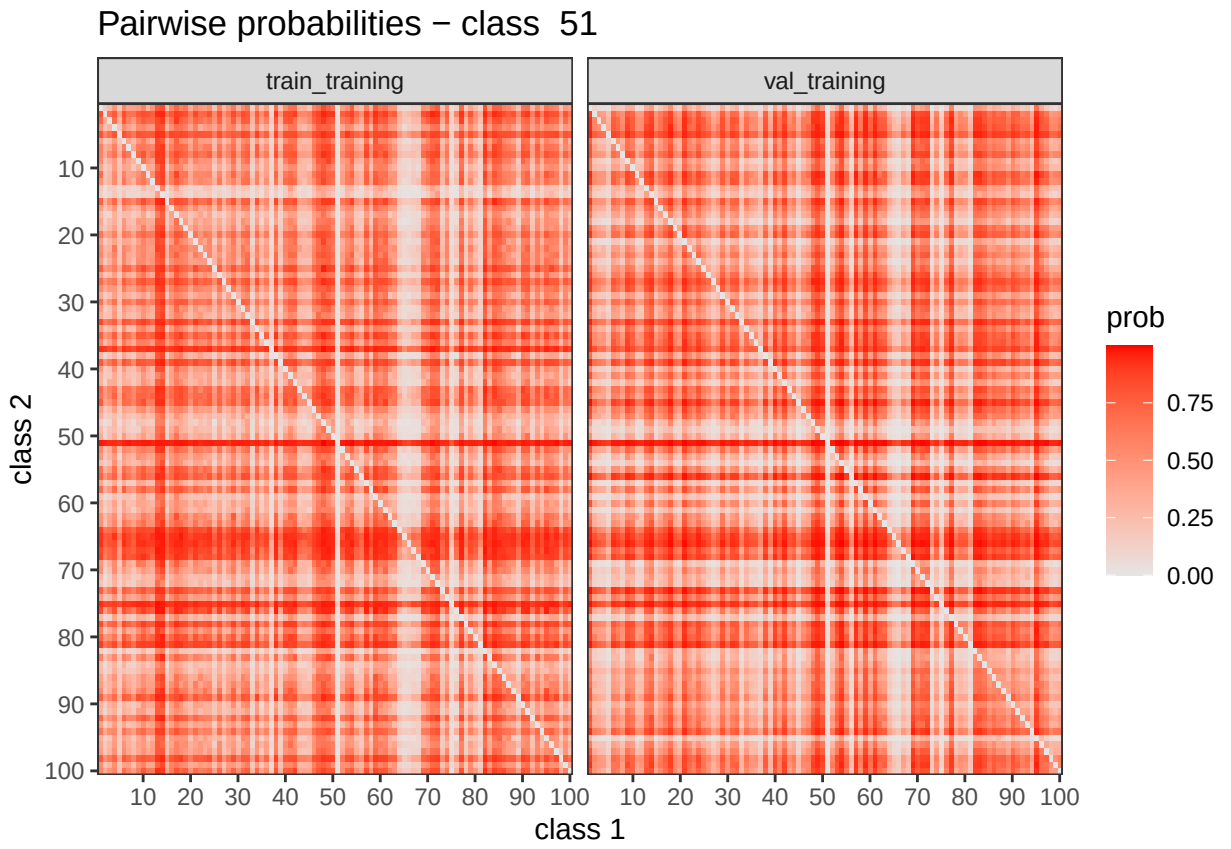

Pairwise probabilities − class 46
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

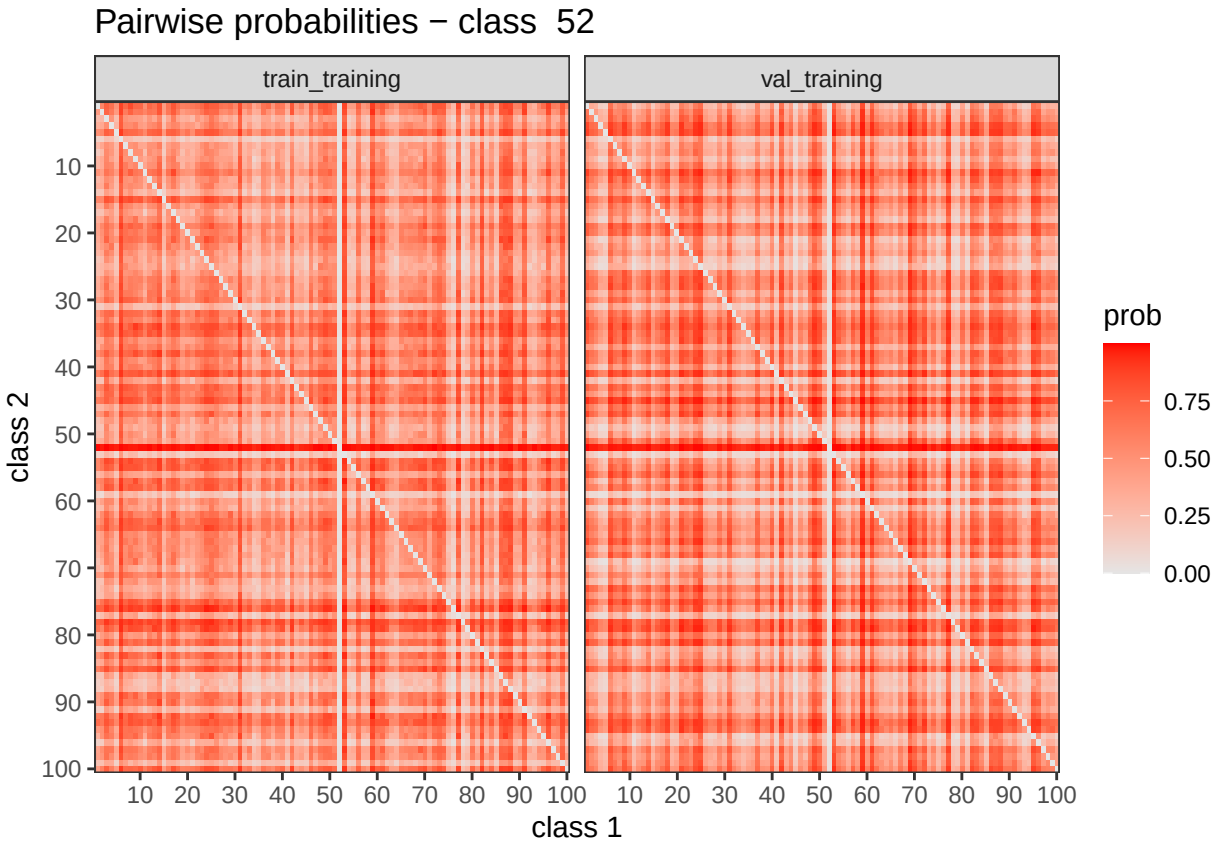

Pairwise probabilities − class 47
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

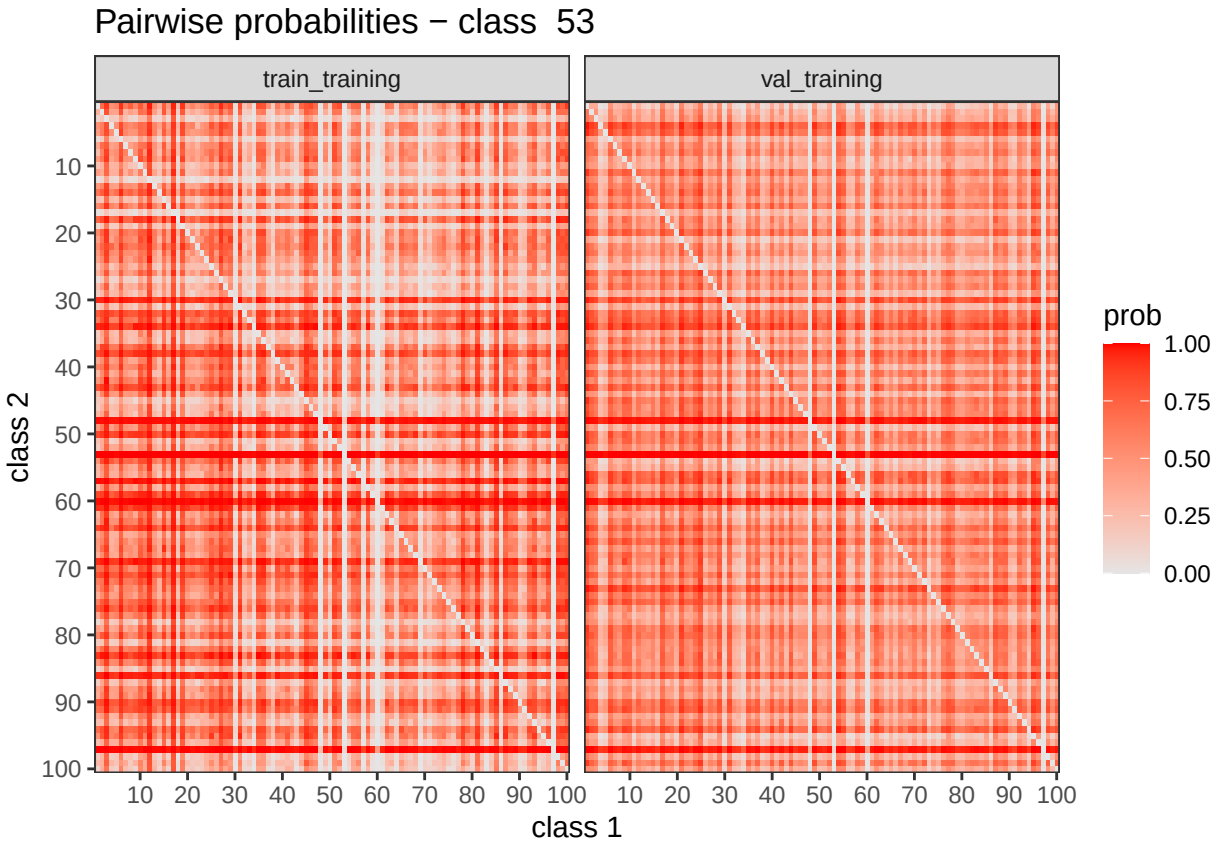

Pairwise probabilities − class 48
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

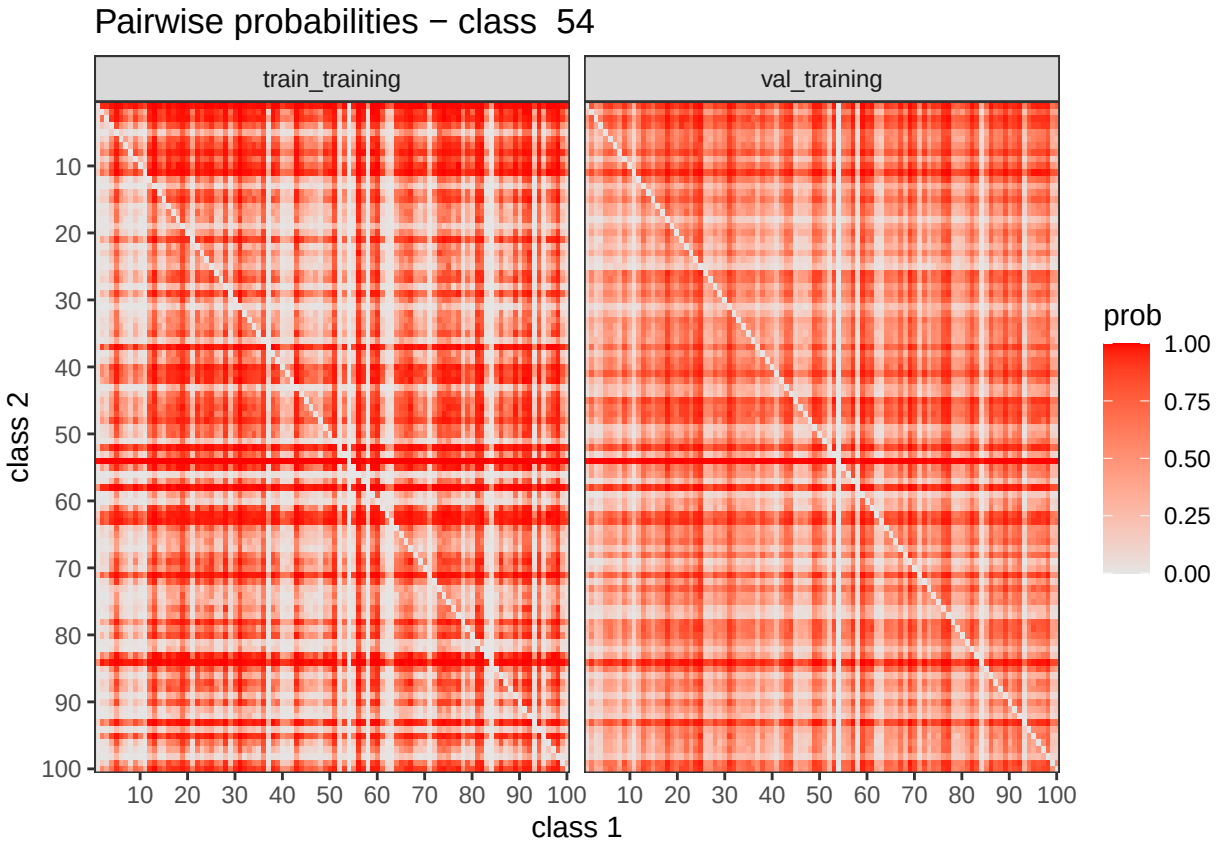

Pairwise probabilities − class 49
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

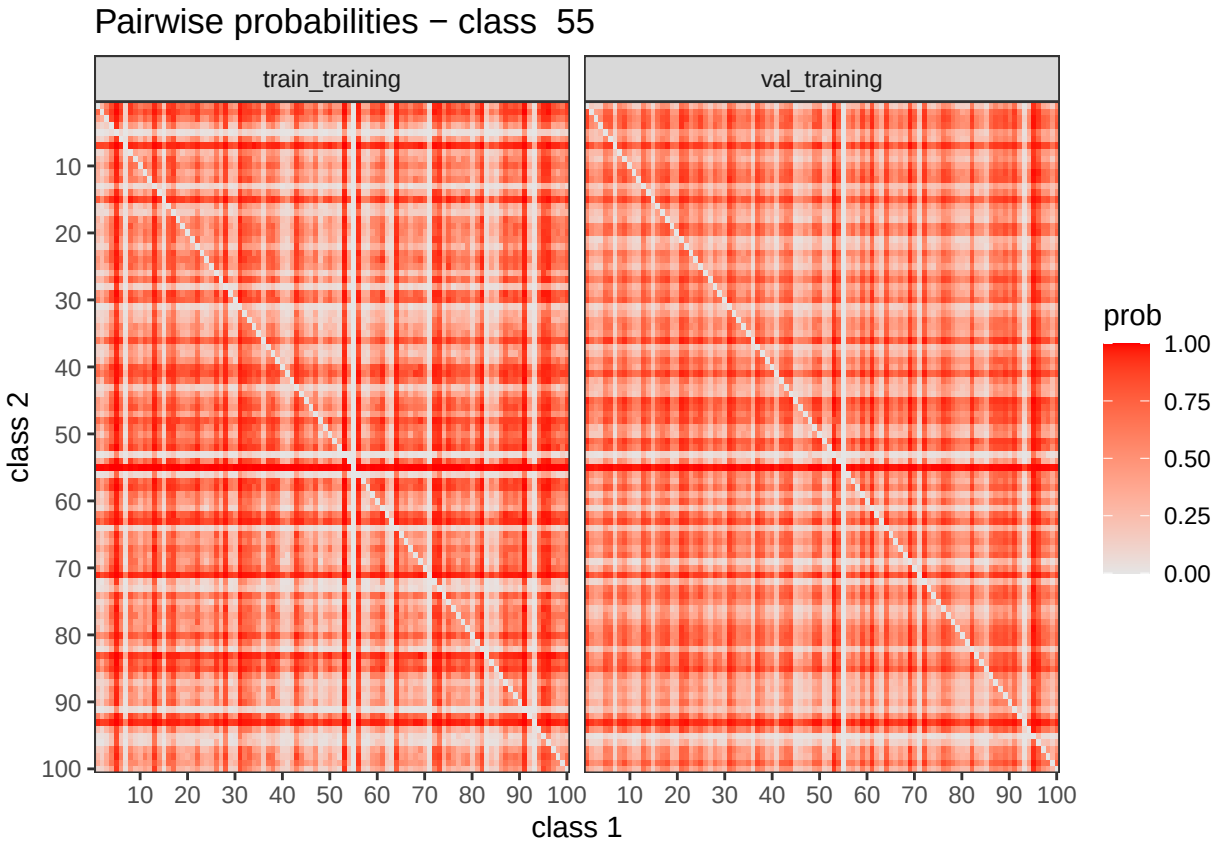

Pairwise probabilities − class 50
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

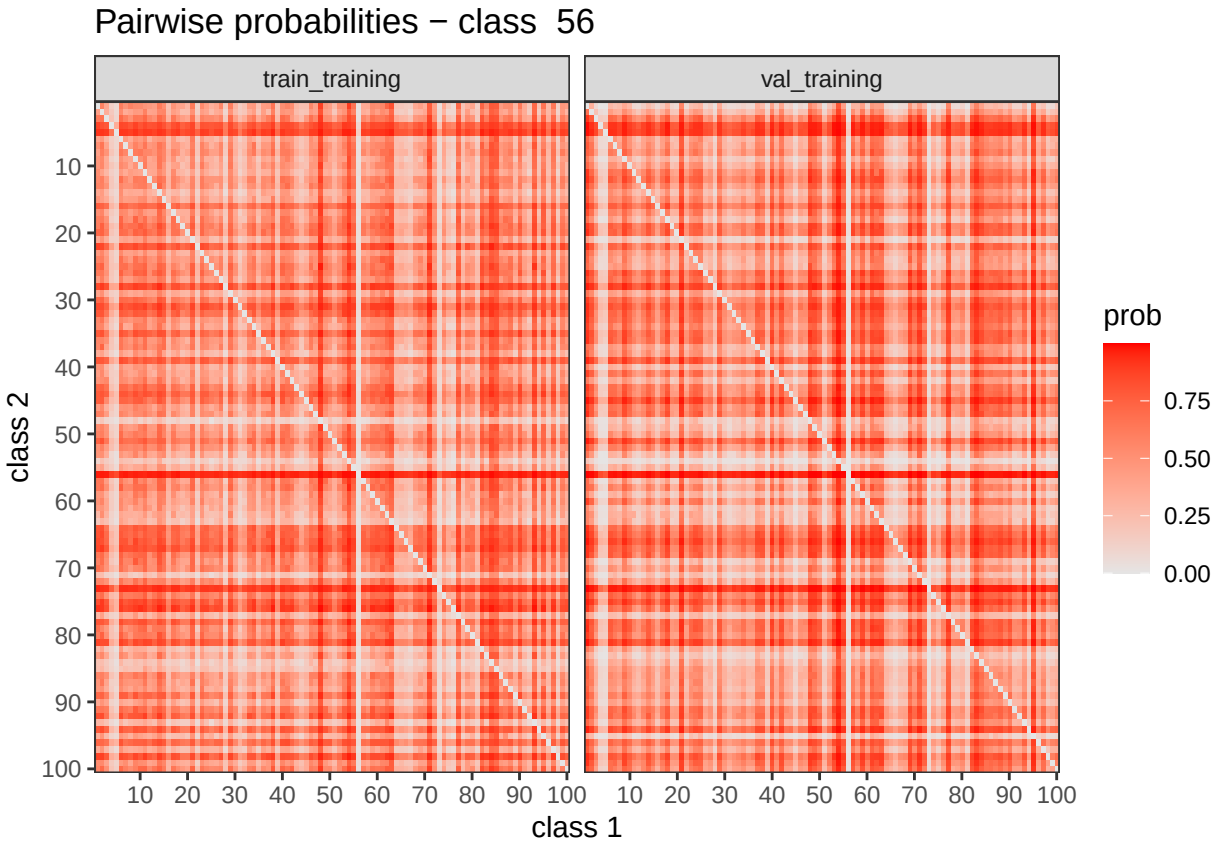

Pairwise probabilities − class 51
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

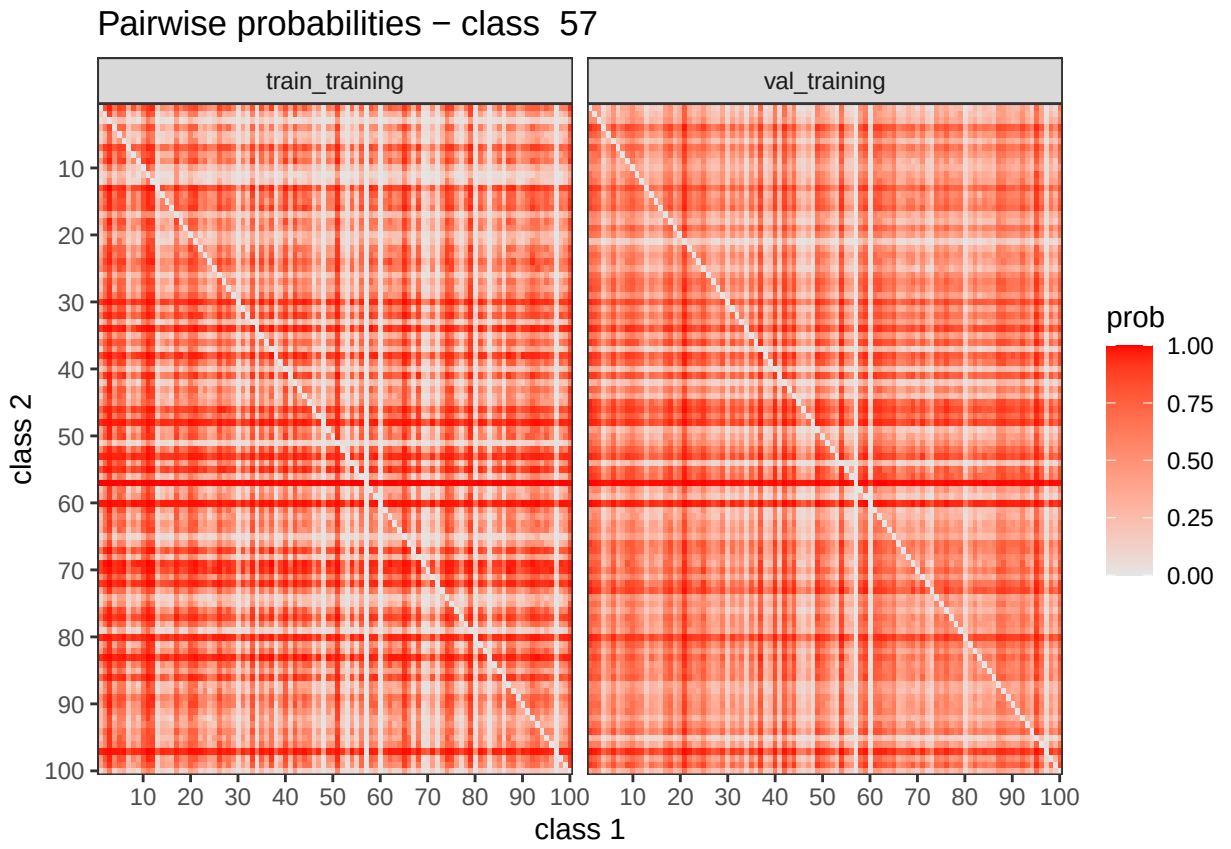

Pairwise probabilities − class 52
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

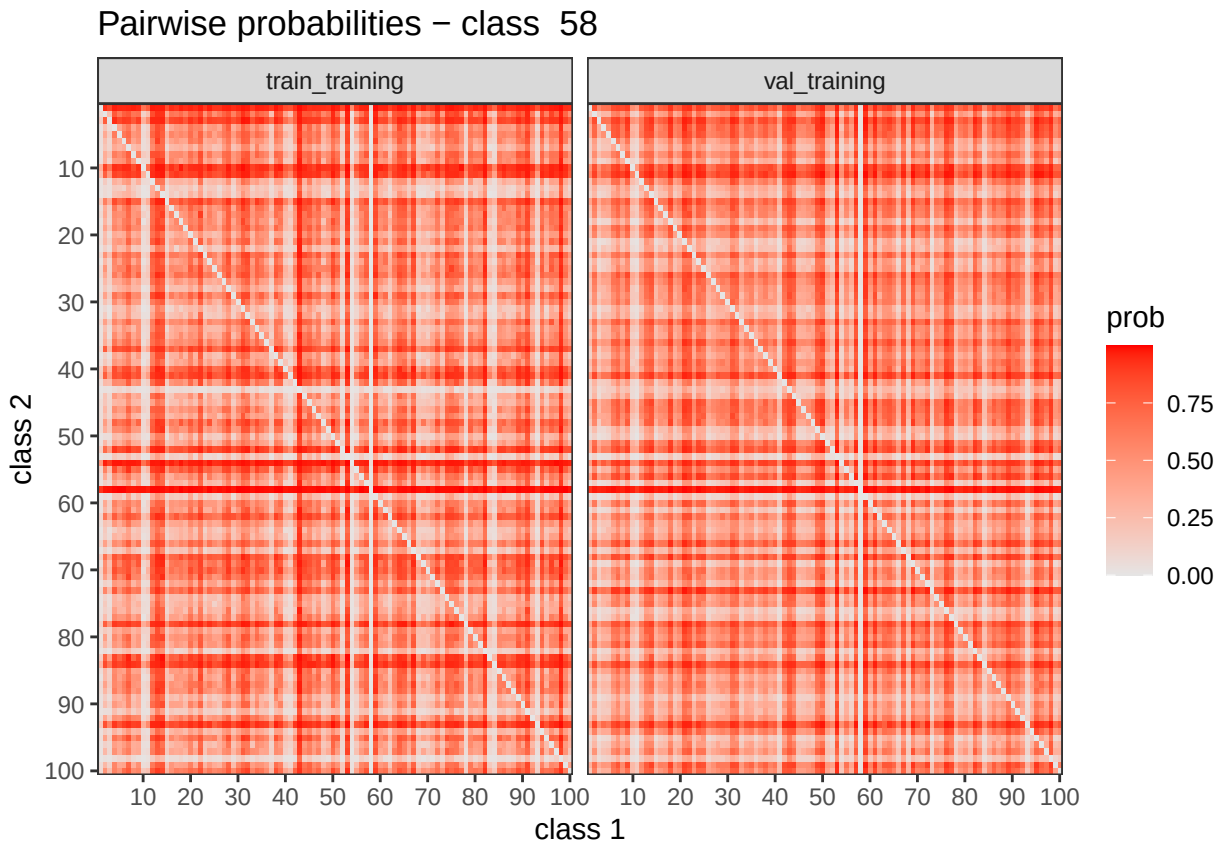

Pairwise probabilities − class 53
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

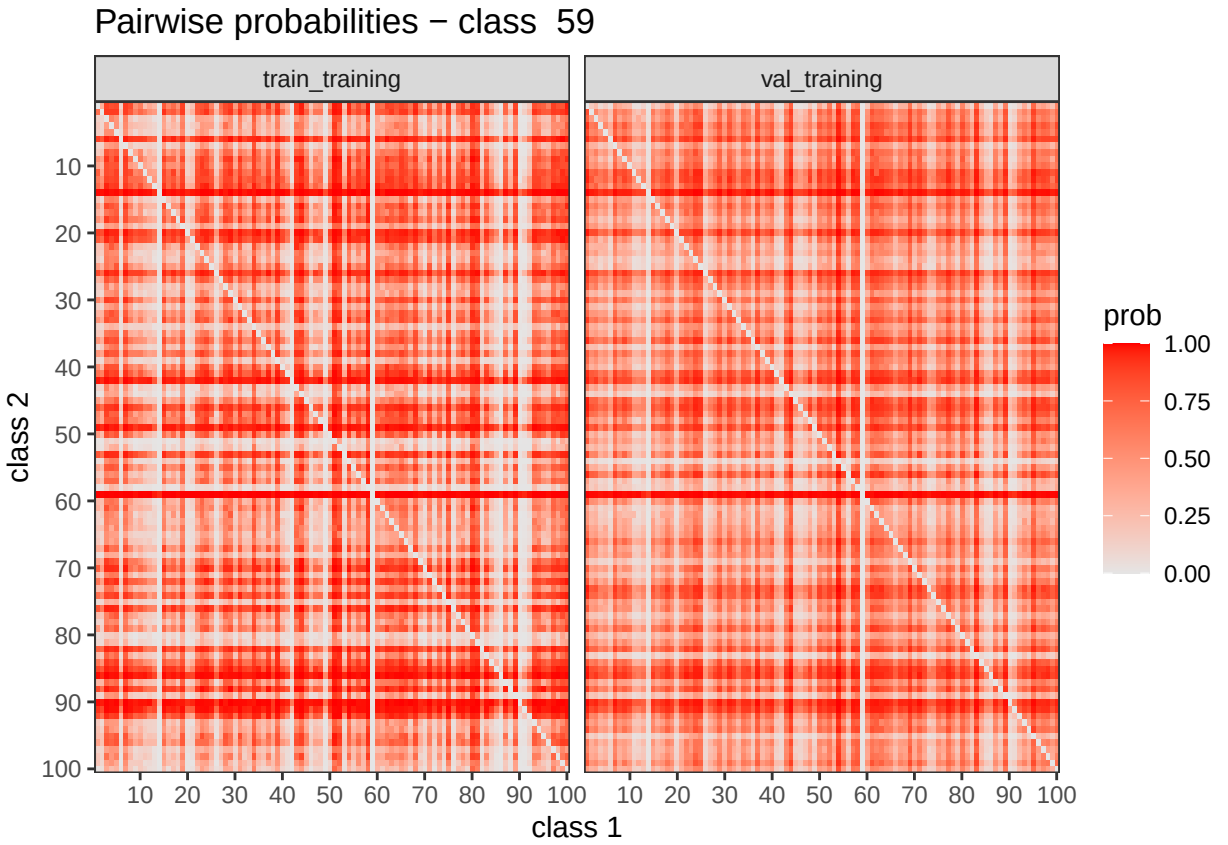

Pairwise probabilities − class 54
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

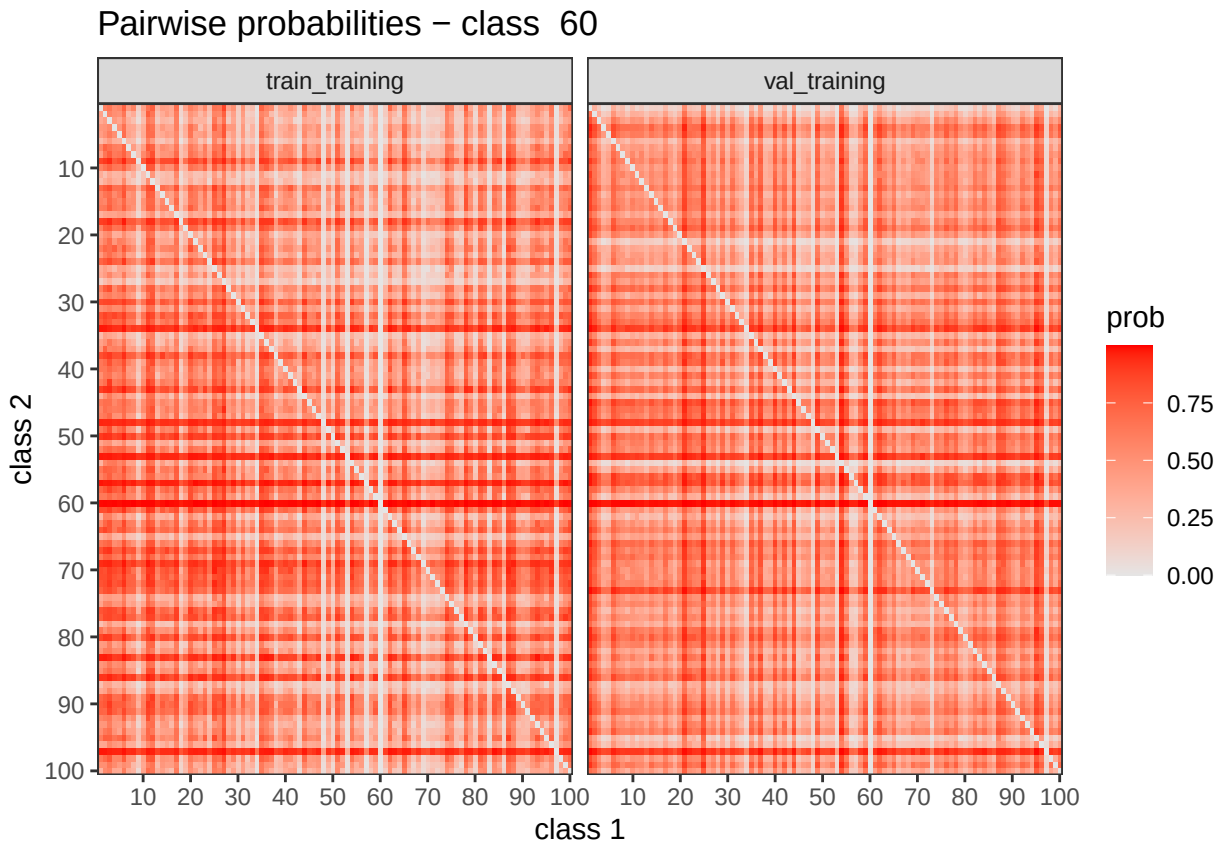

Pairwise probabilities − class 55
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

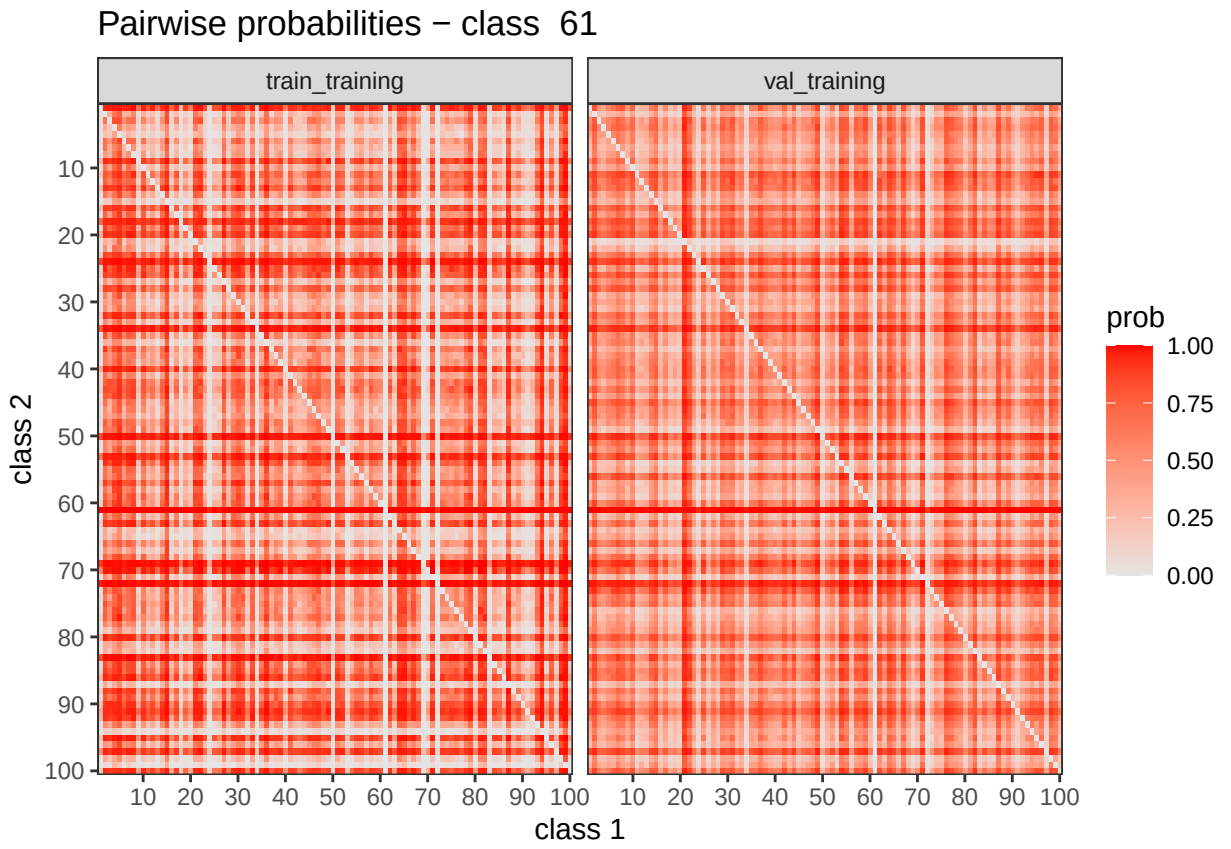

Pairwise probabilities − class 56
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

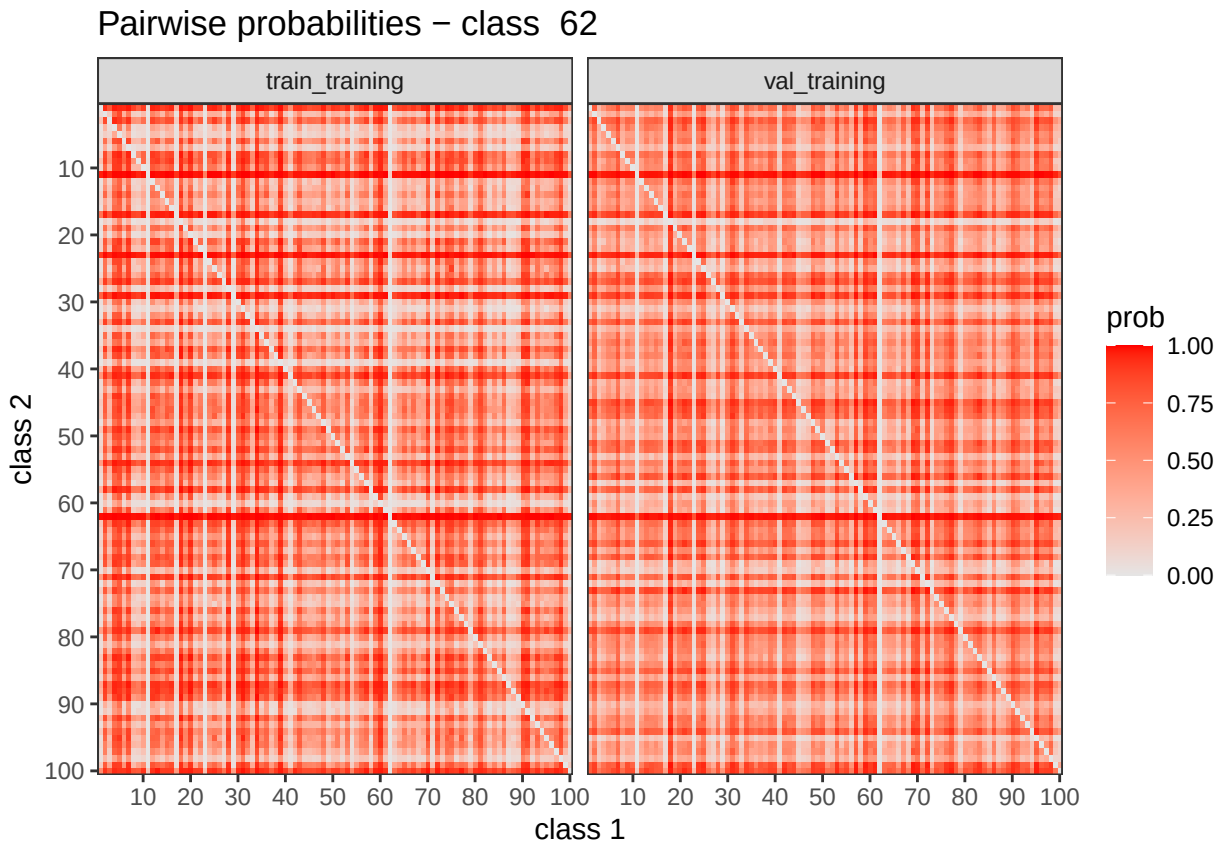

Pairwise probabilities − class 57
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

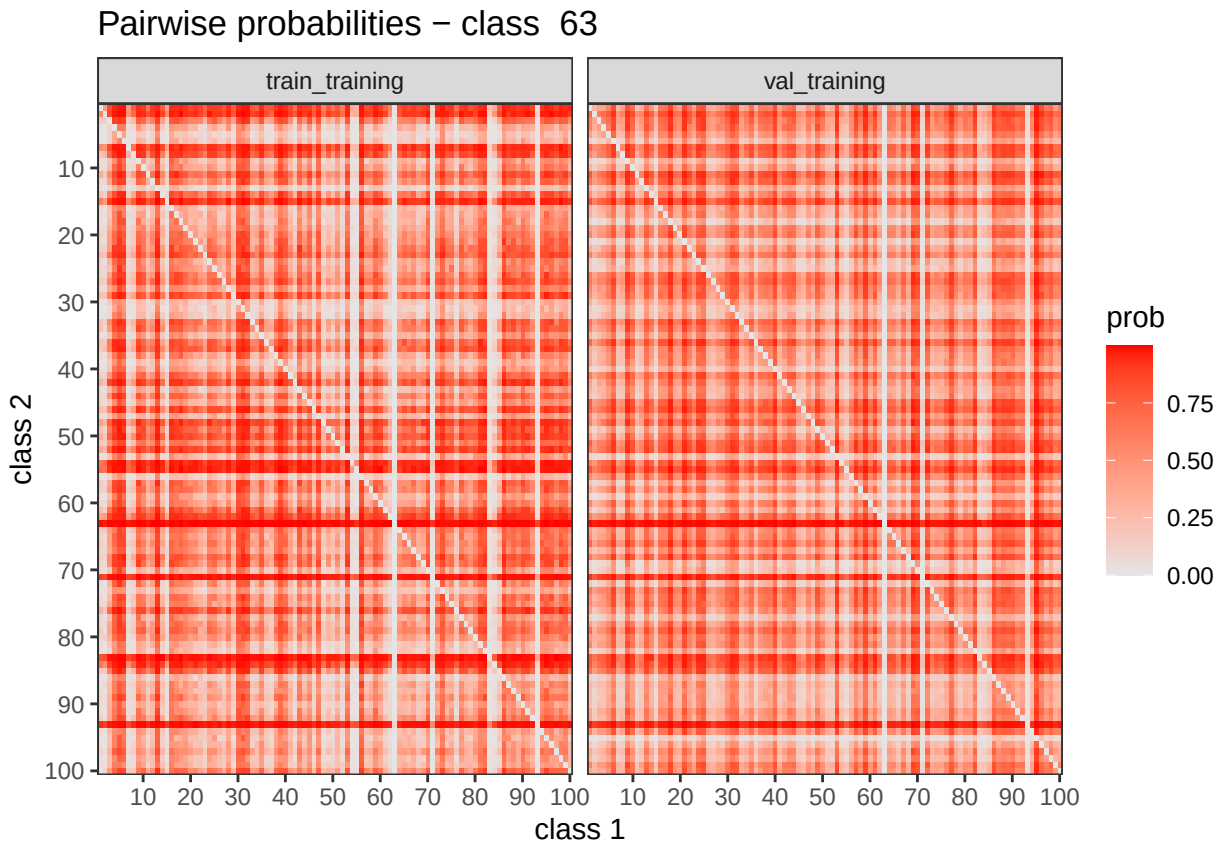

Pairwise probabilities − class 58
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

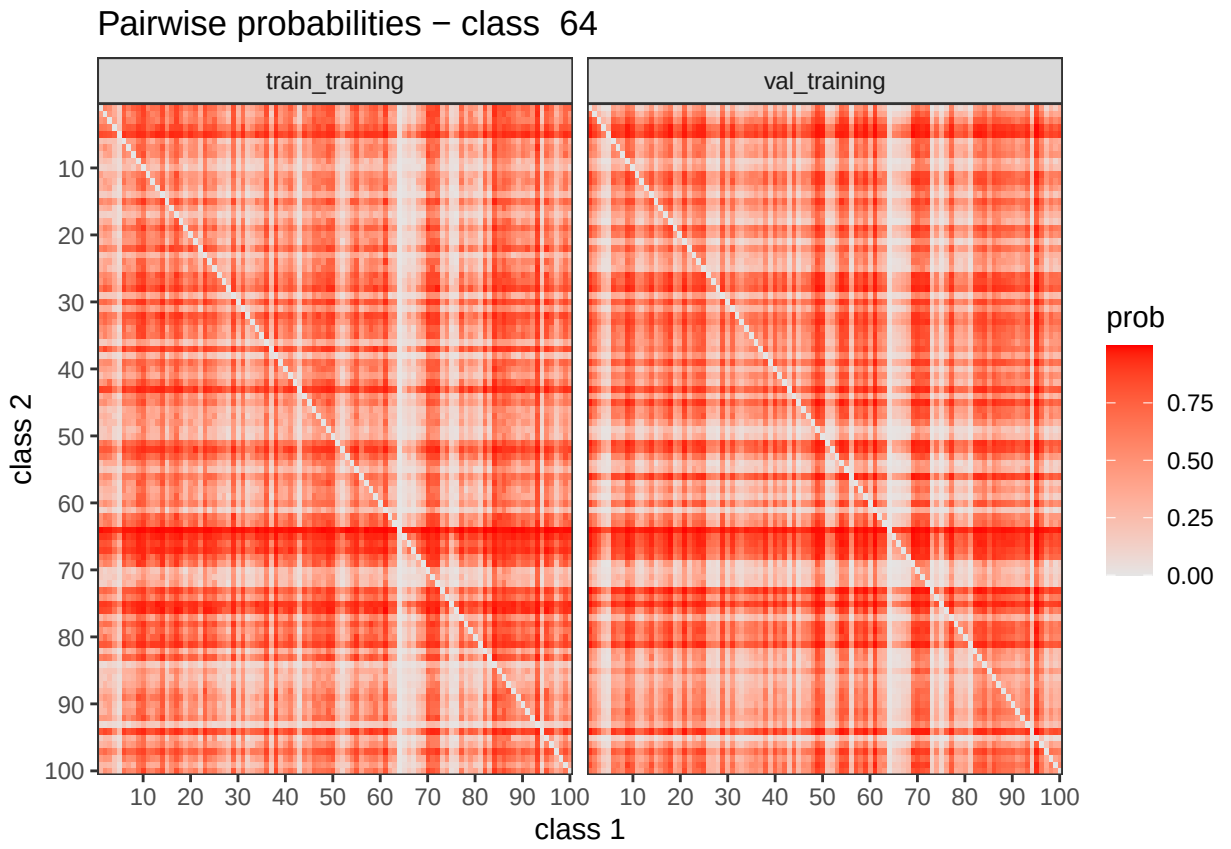

Pairwise probabilities − class 59
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

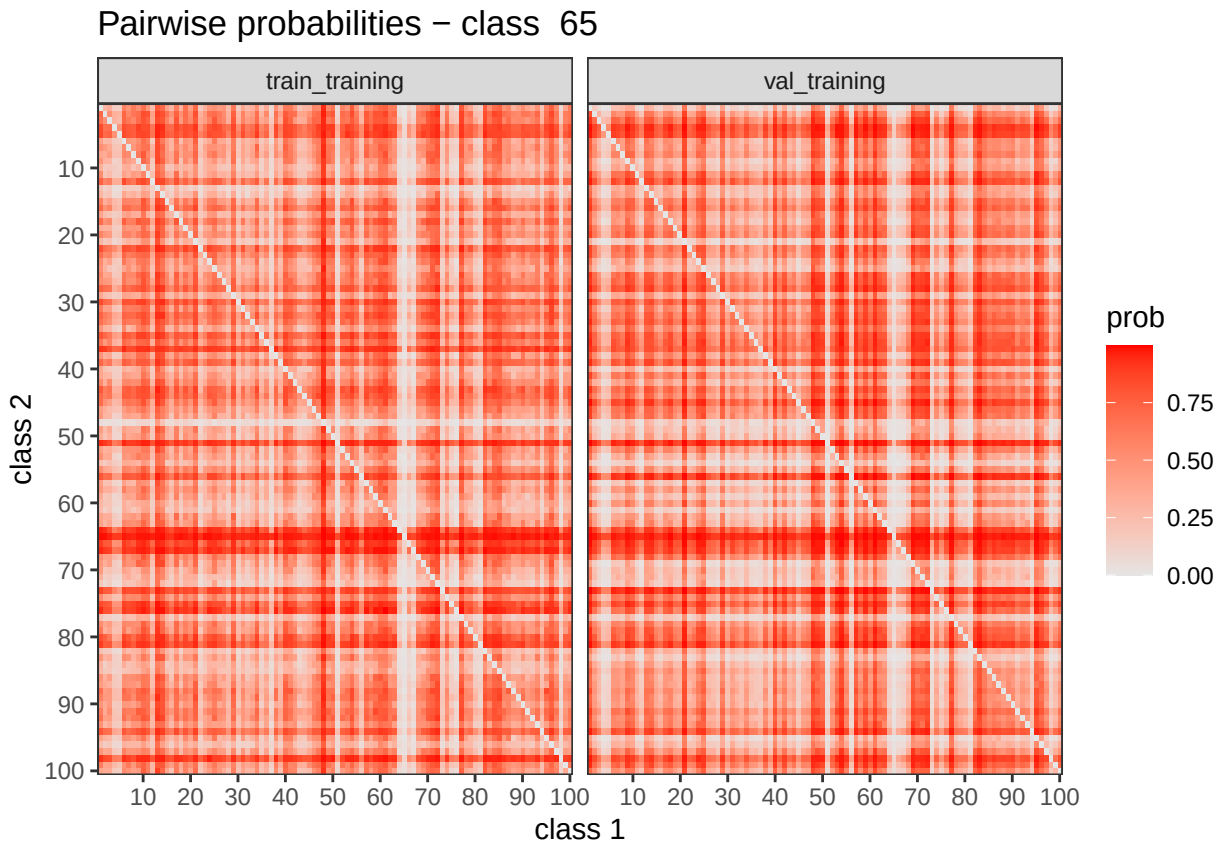

Pairwise probabilities − class 60
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

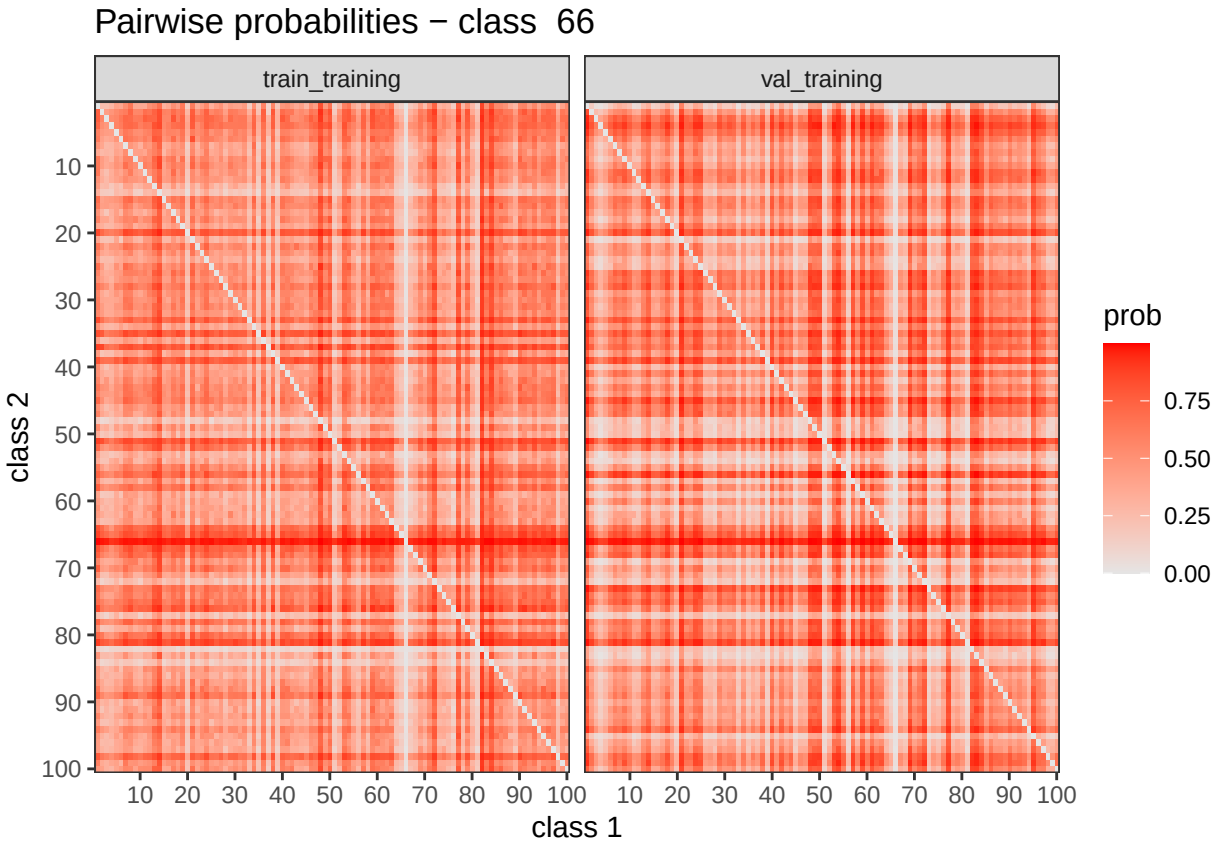

Pairwise probabilities − class 61
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

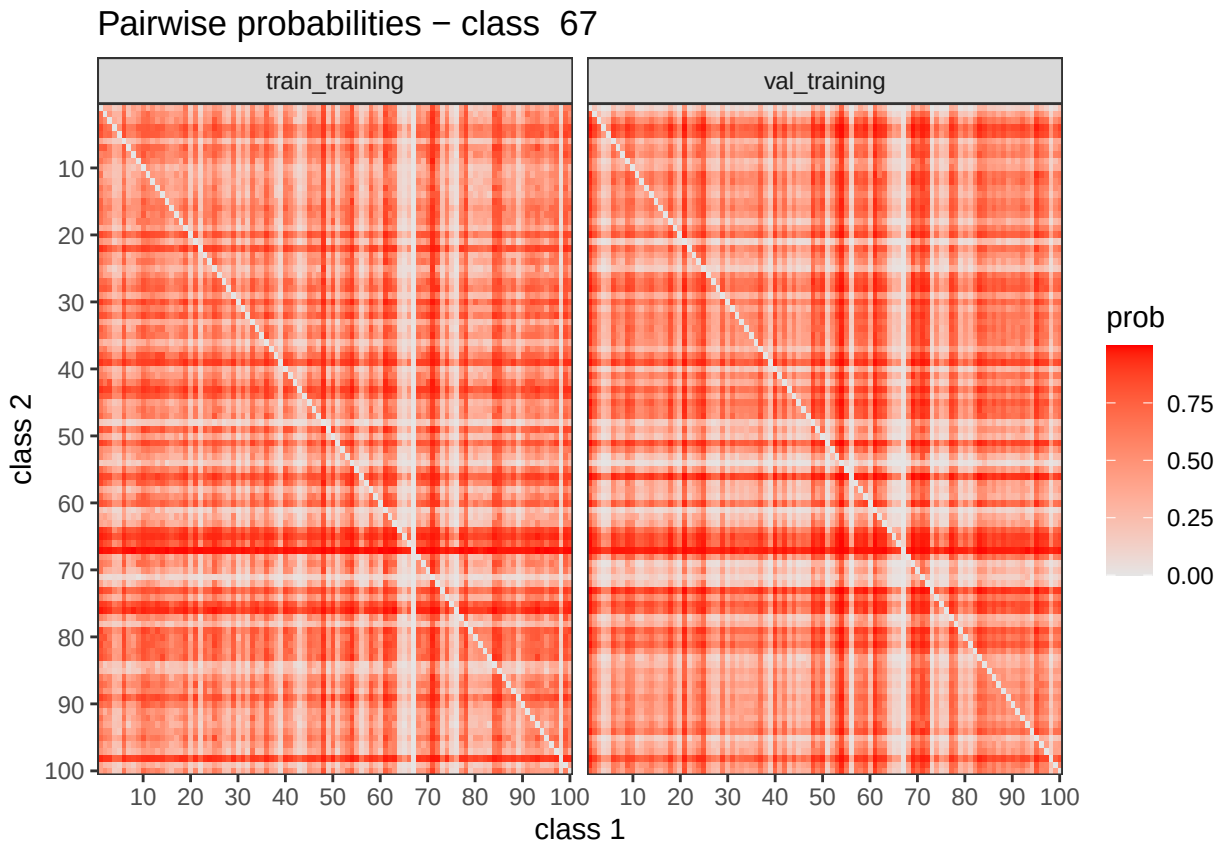

Pairwise probabilities − class 62
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

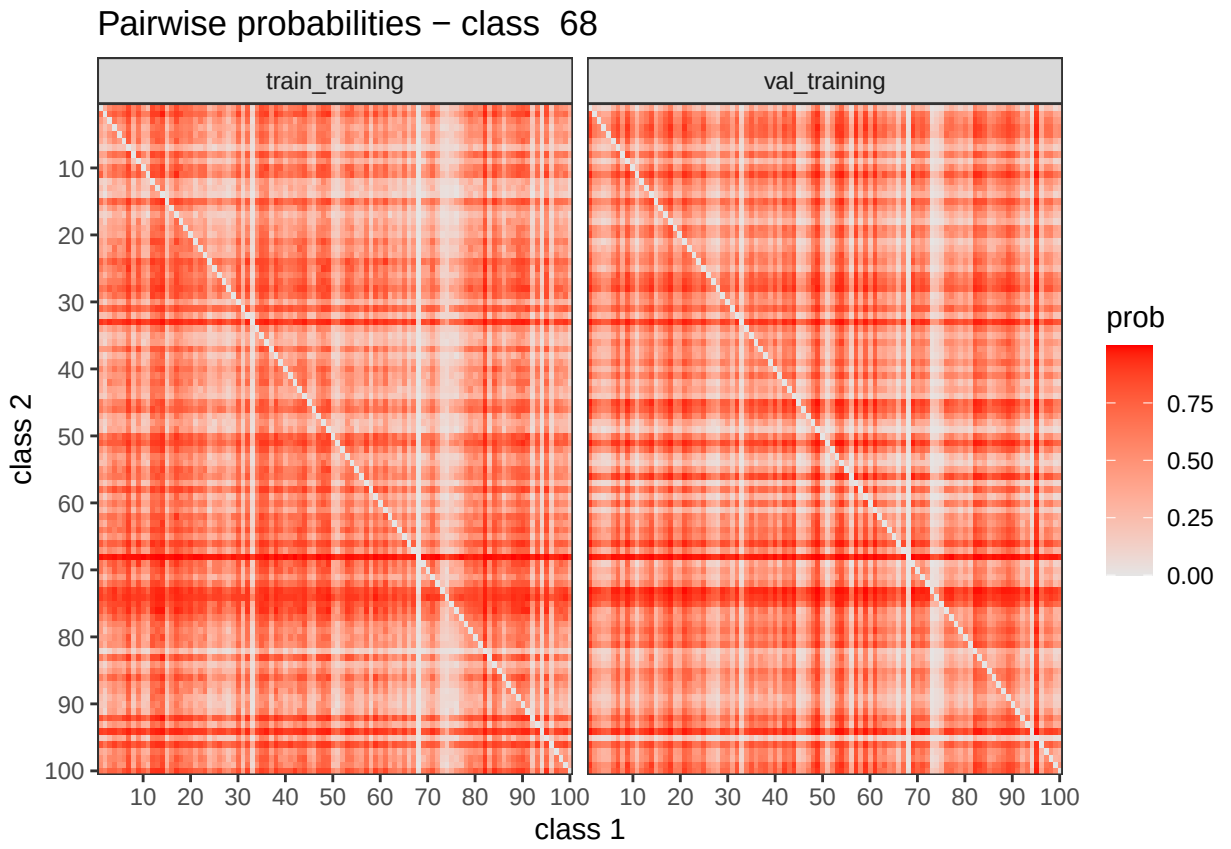

Pairwise probabilities − class 63
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

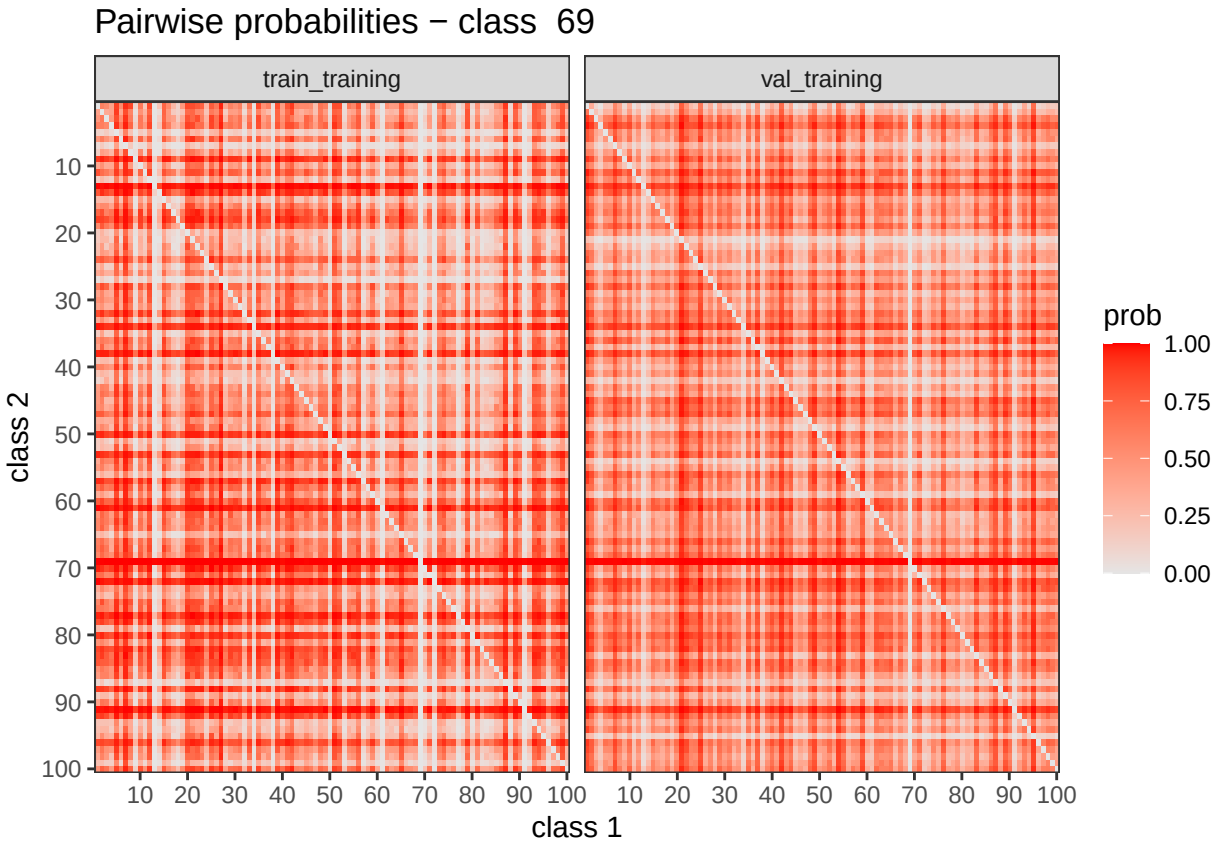

Pairwise probabilities − class 64
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

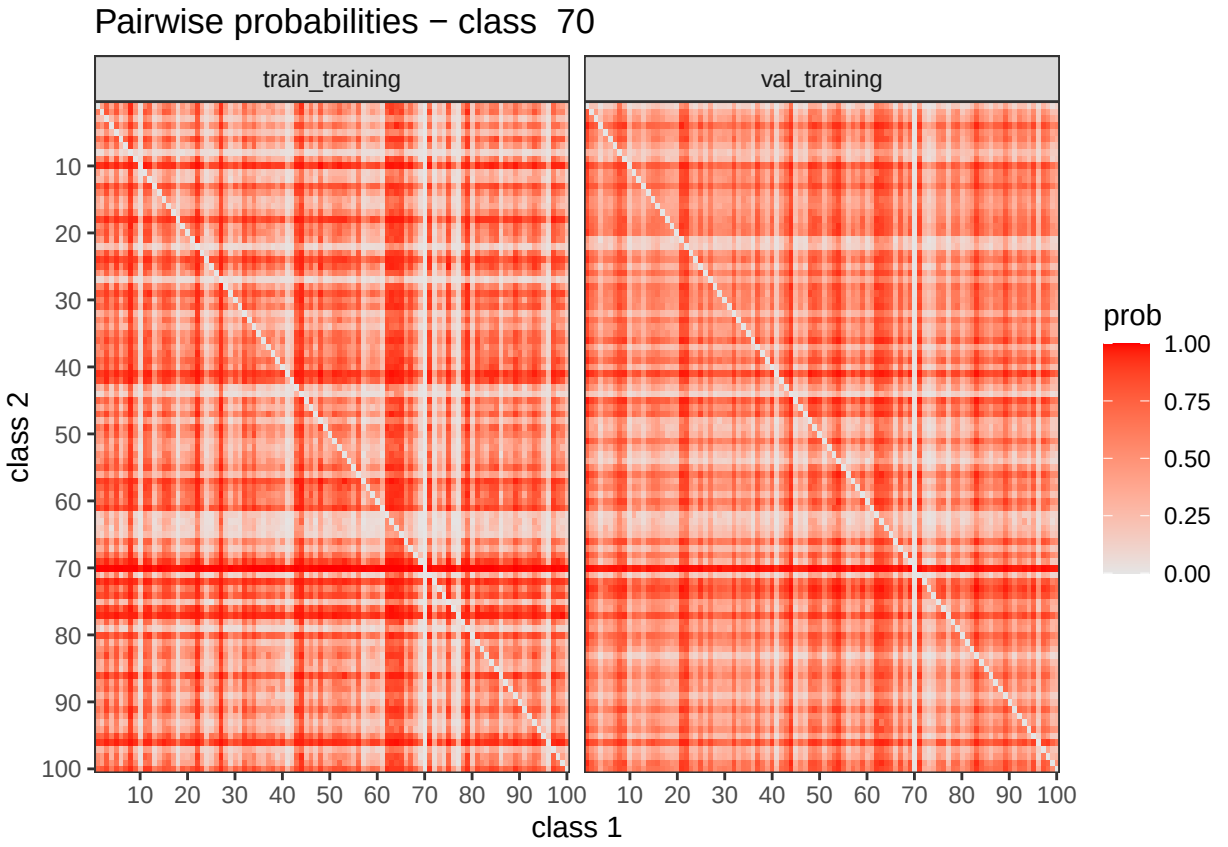

Pairwise probabilities − class 65
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

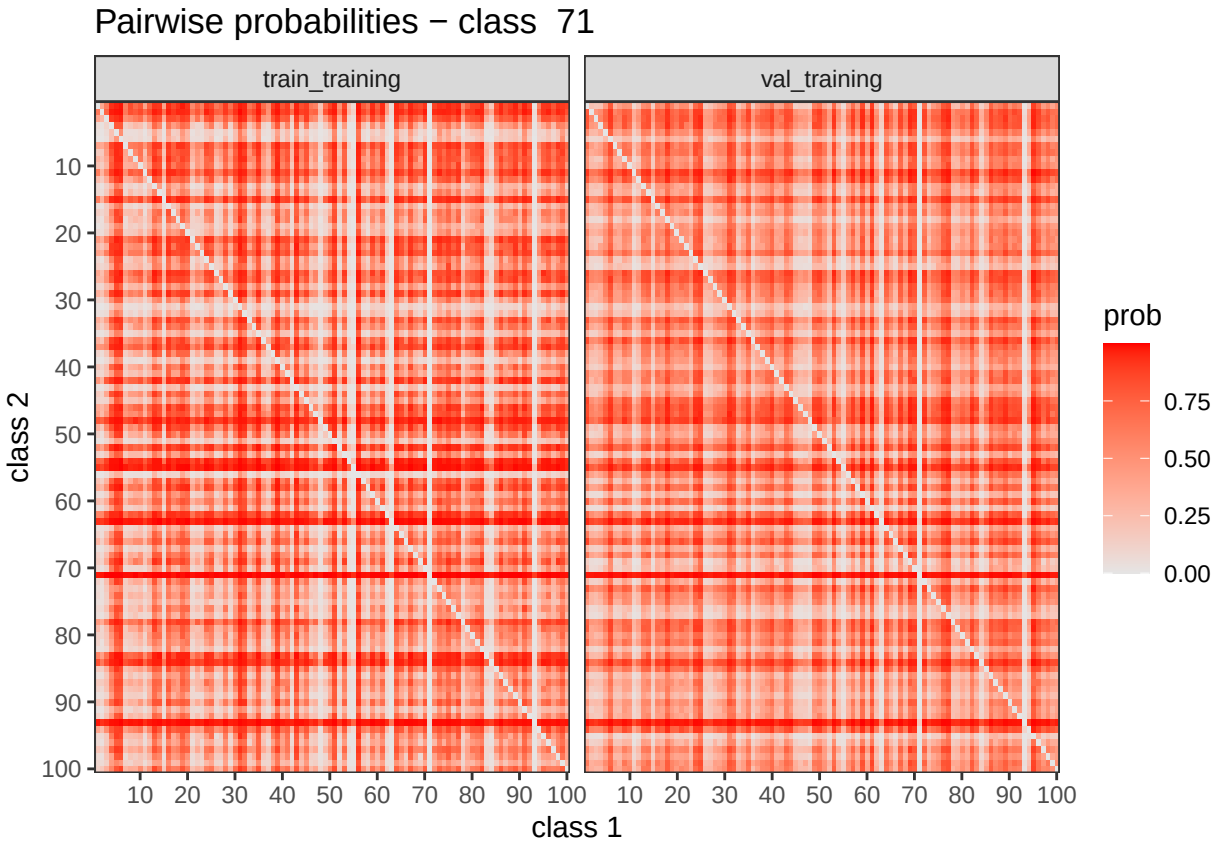

Pairwise probabilities − class 66
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

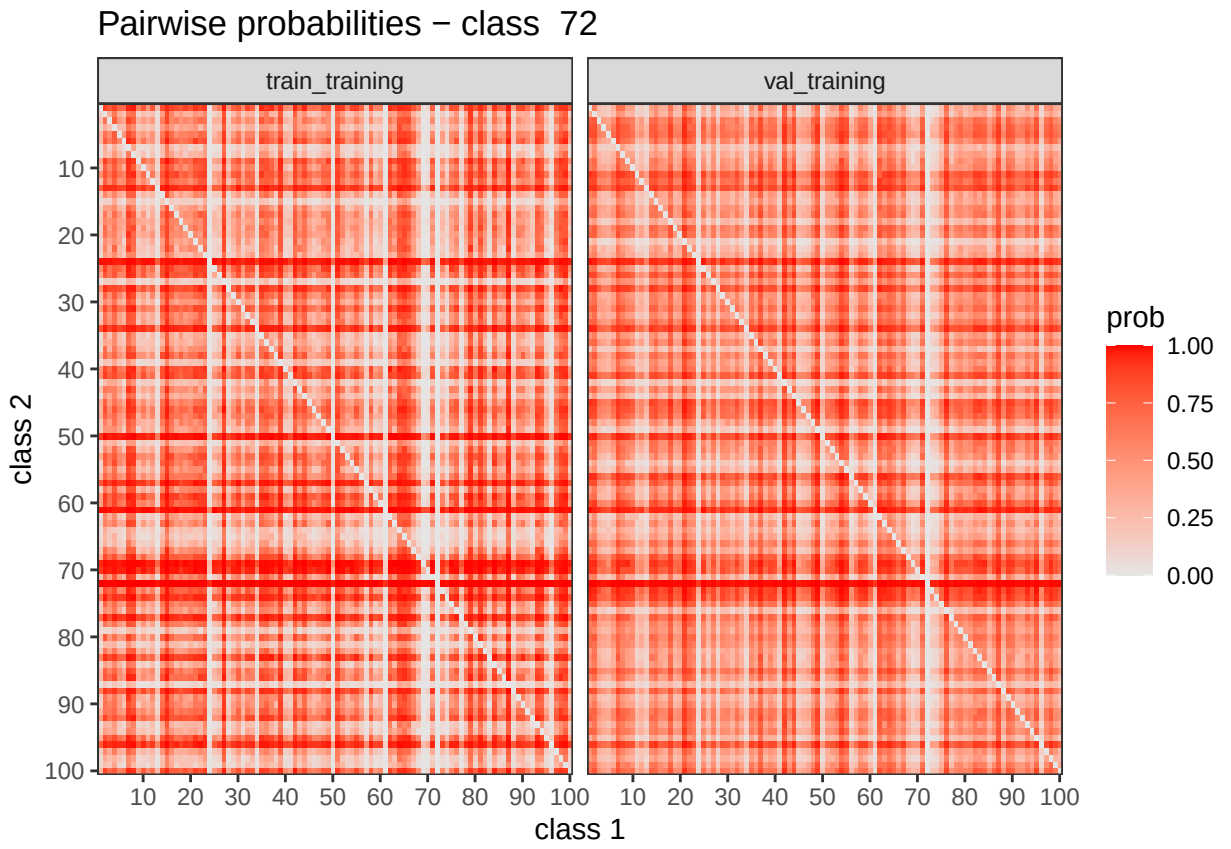

Pairwise probabilities − class 67
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

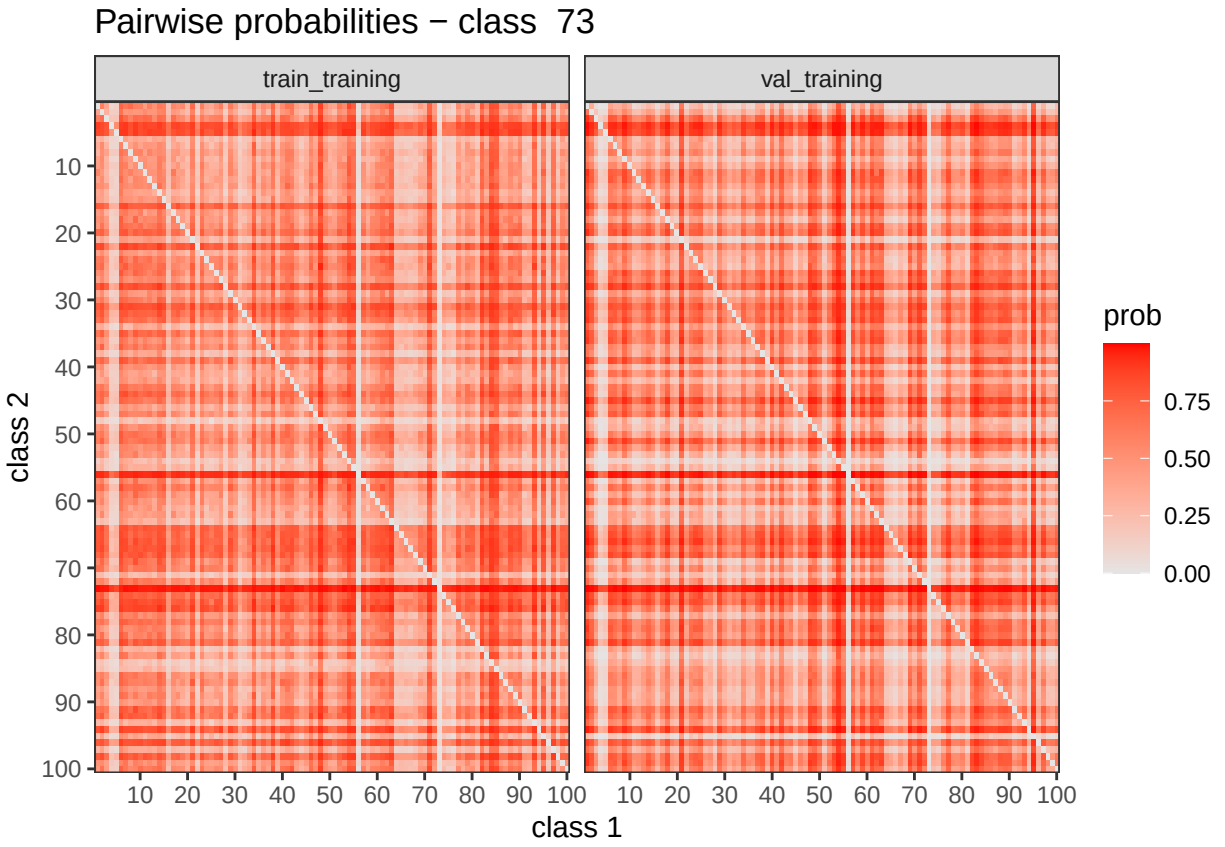

Pairwise probabilities − class 68
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

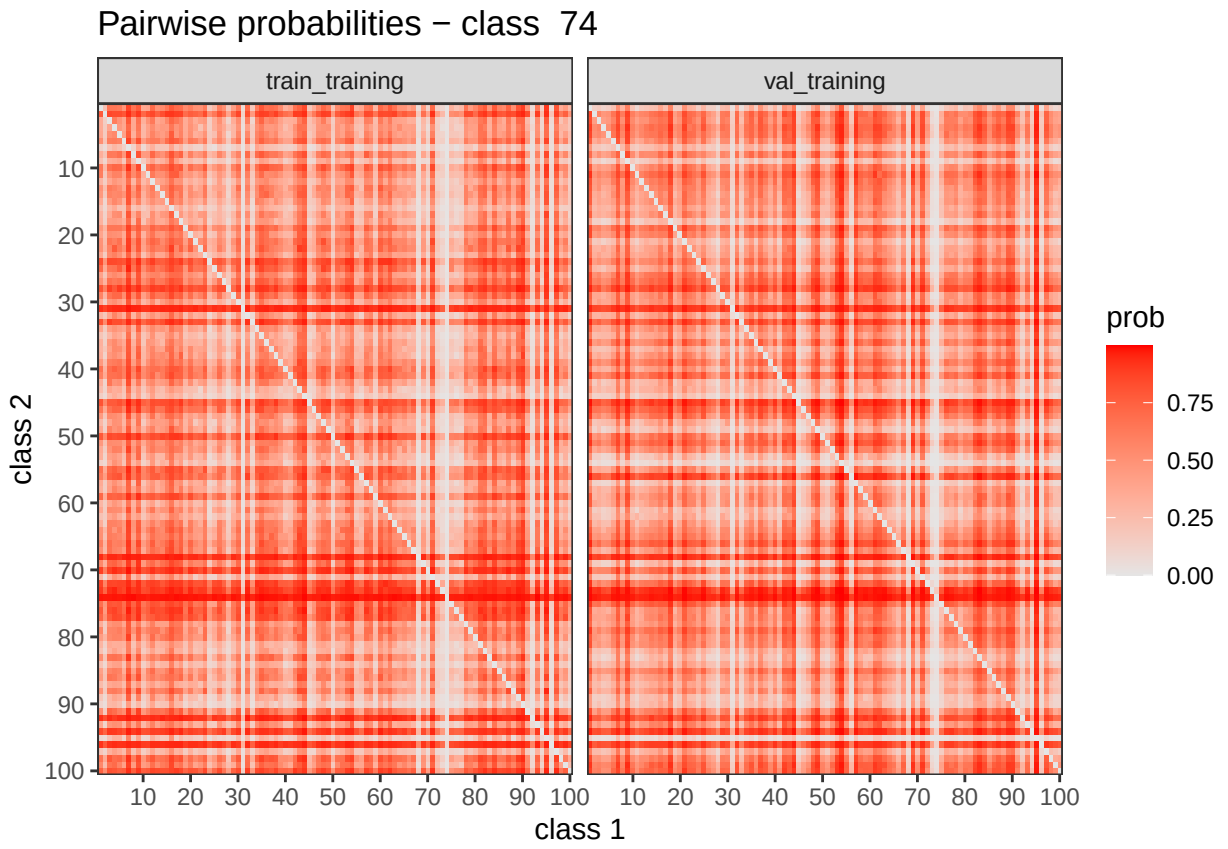

Pairwise probabilities − class 69
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

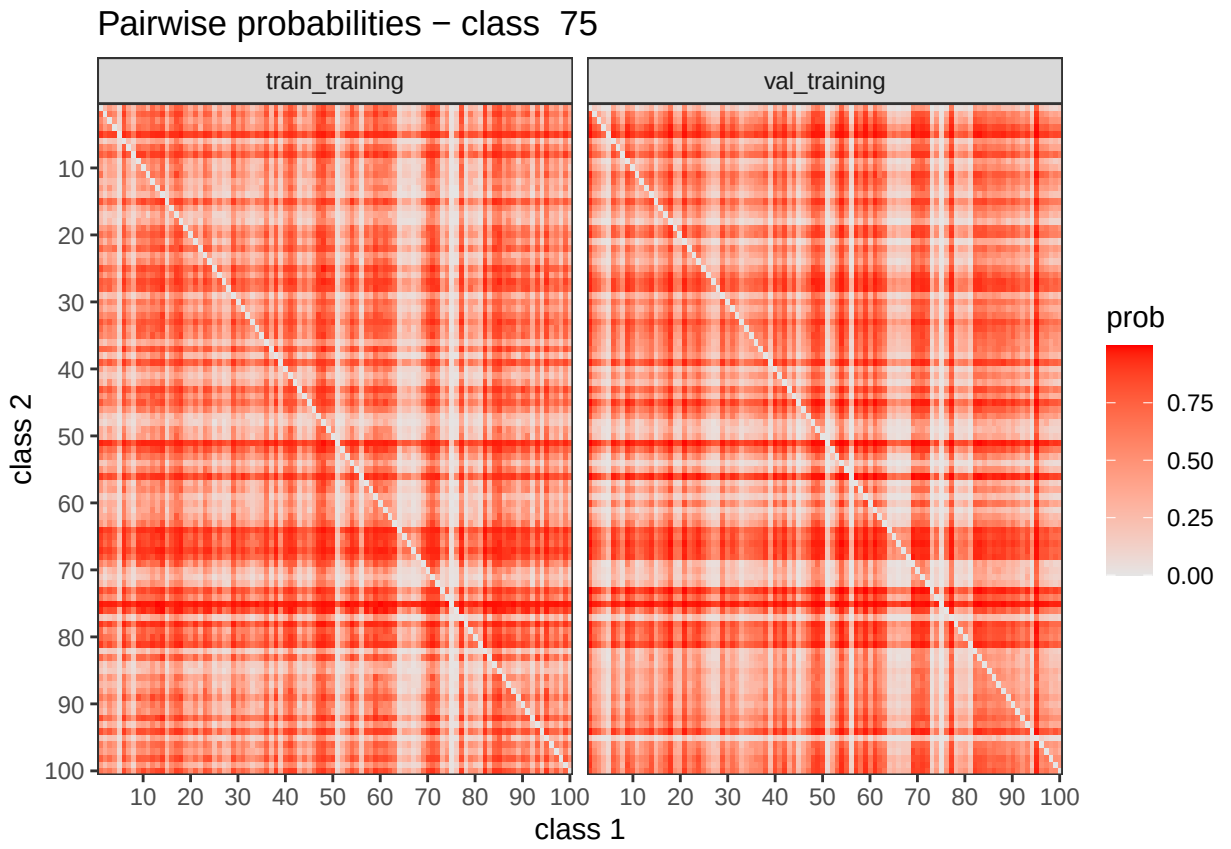

Pairwise probabilities − class 70
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

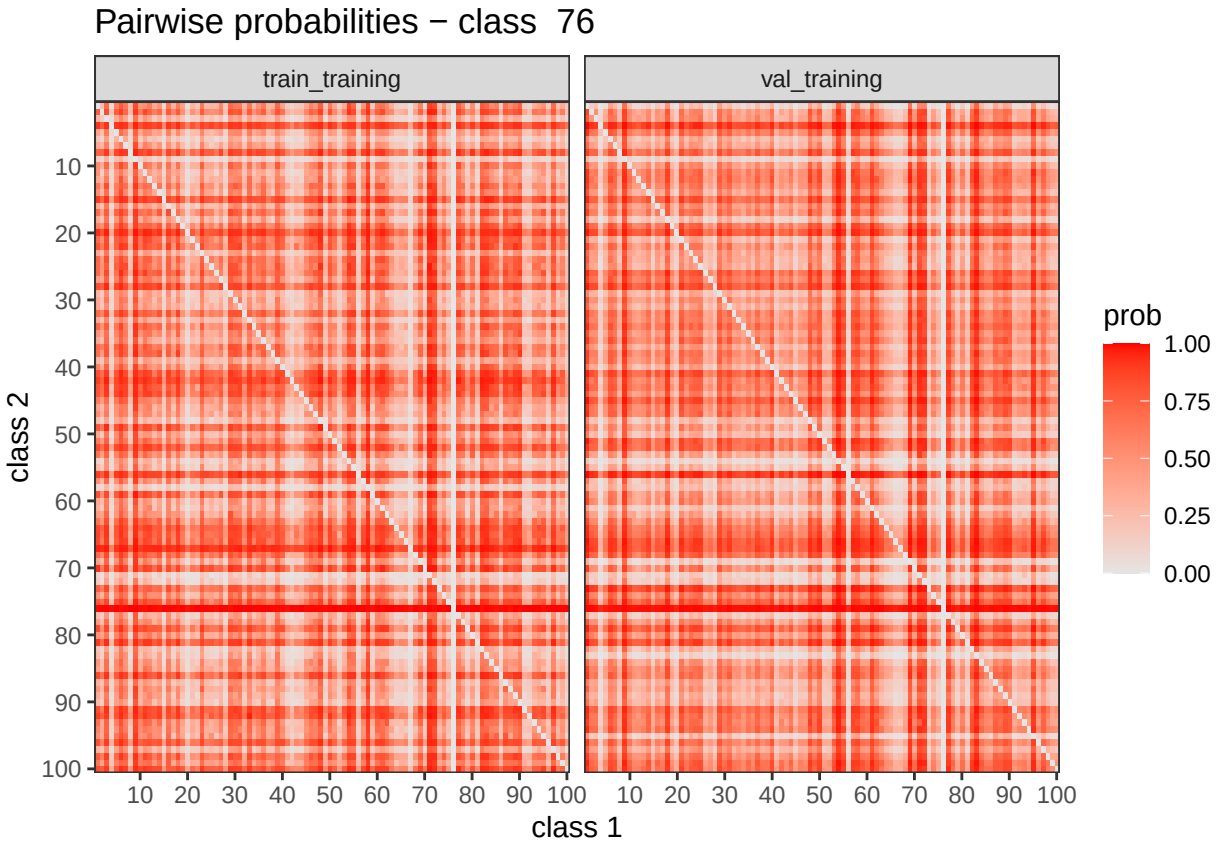

Pairwise probabilities − class 71
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

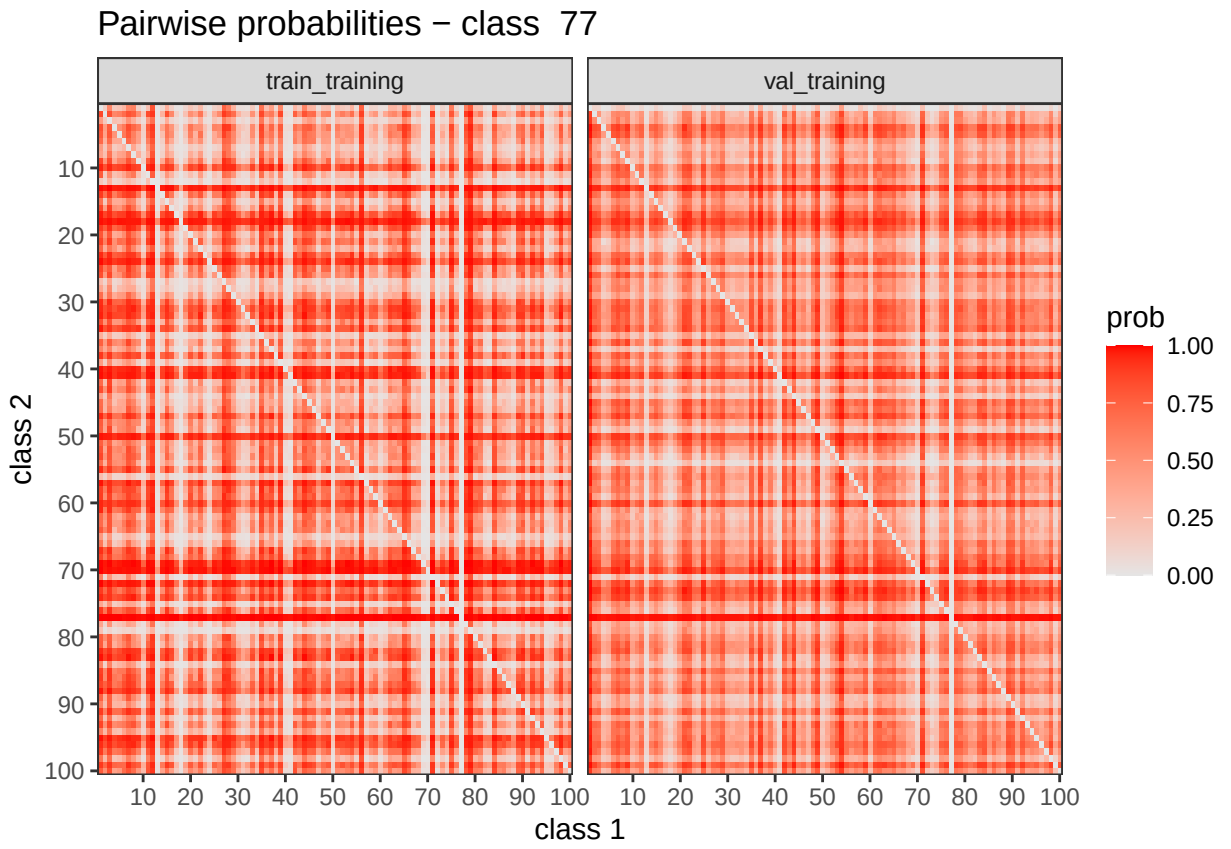

Pairwise probabilities − class 72
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

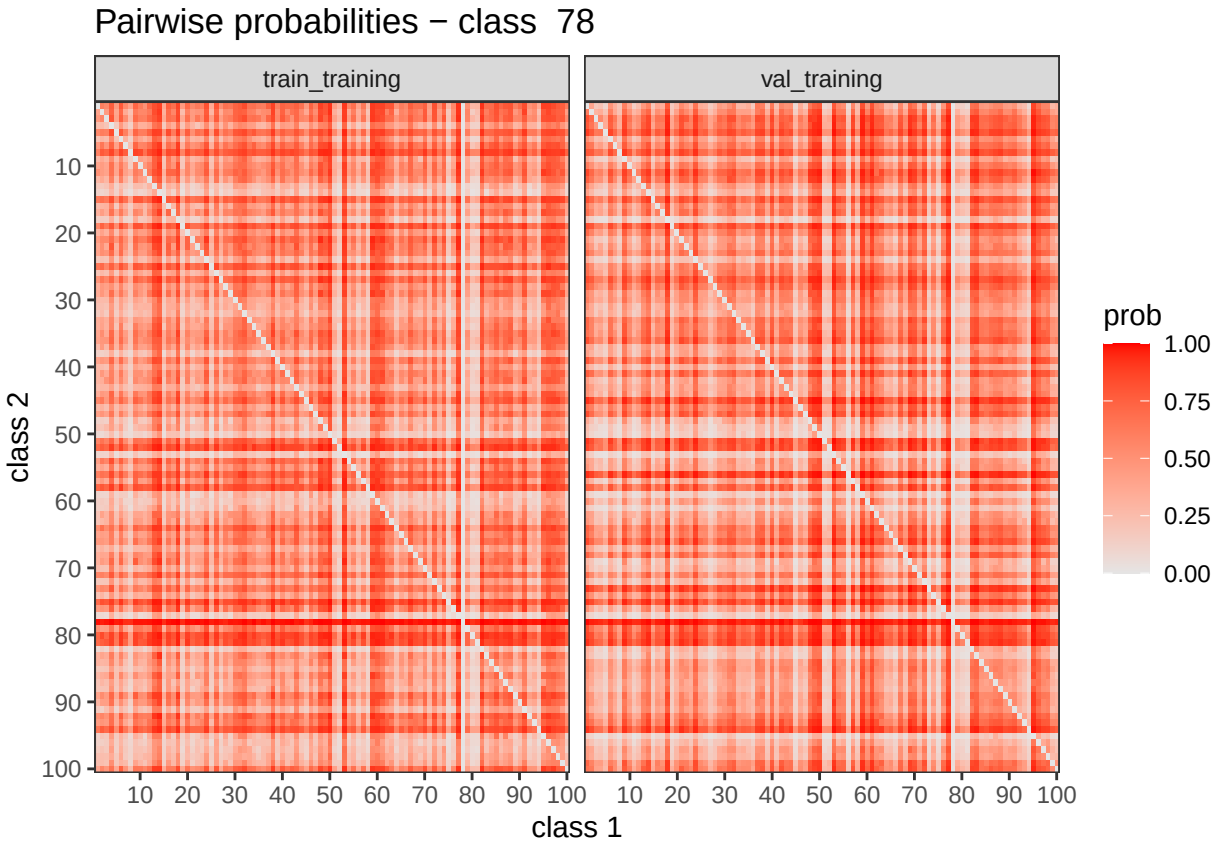

Pairwise probabilities − class 73
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

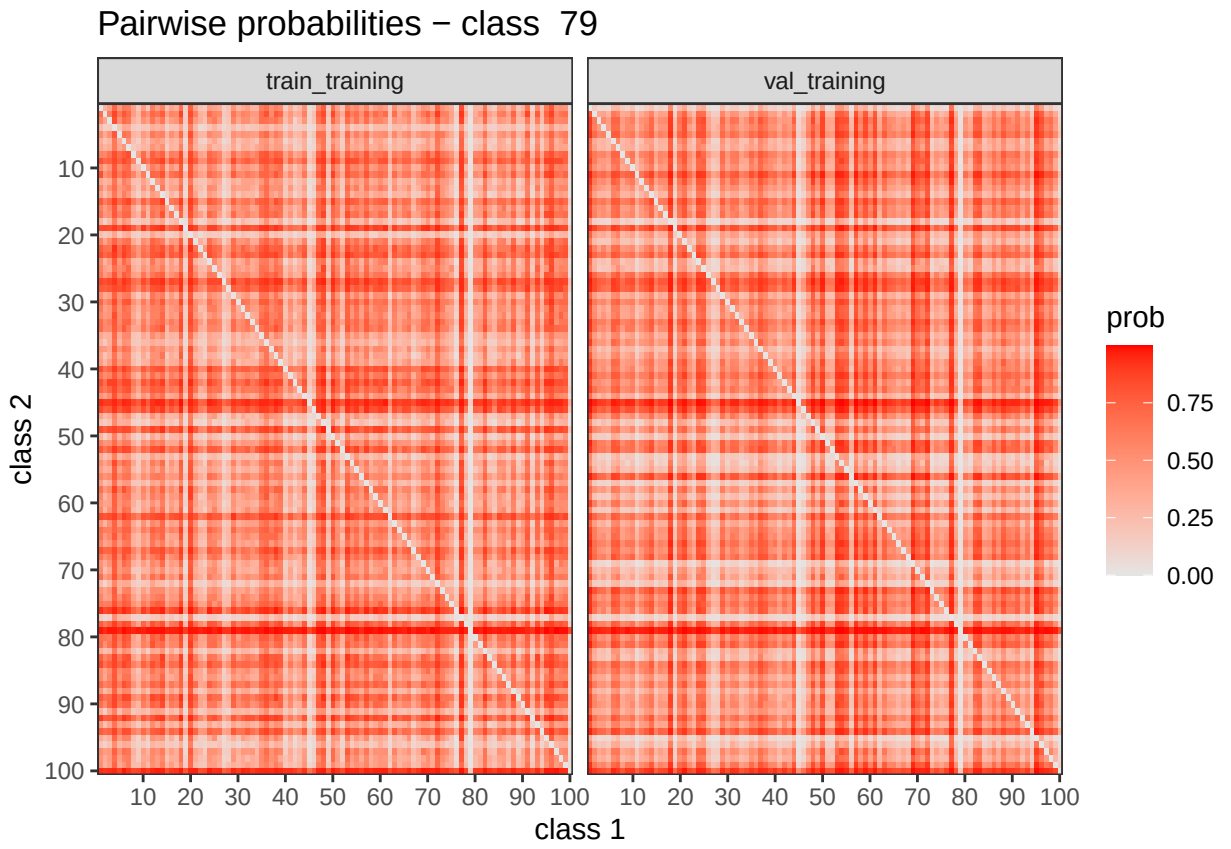

Pairwise probabilities − class 74
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

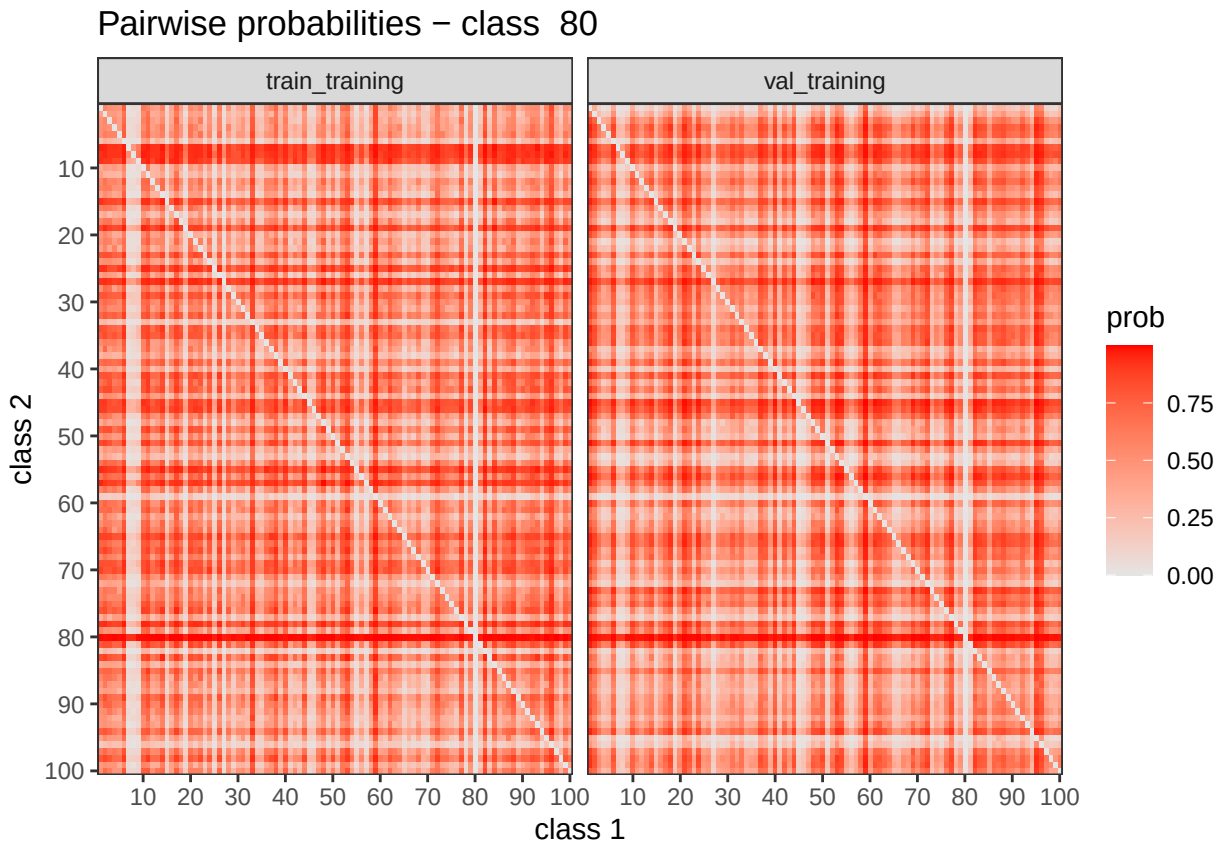

Pairwise probabilities − class 75
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

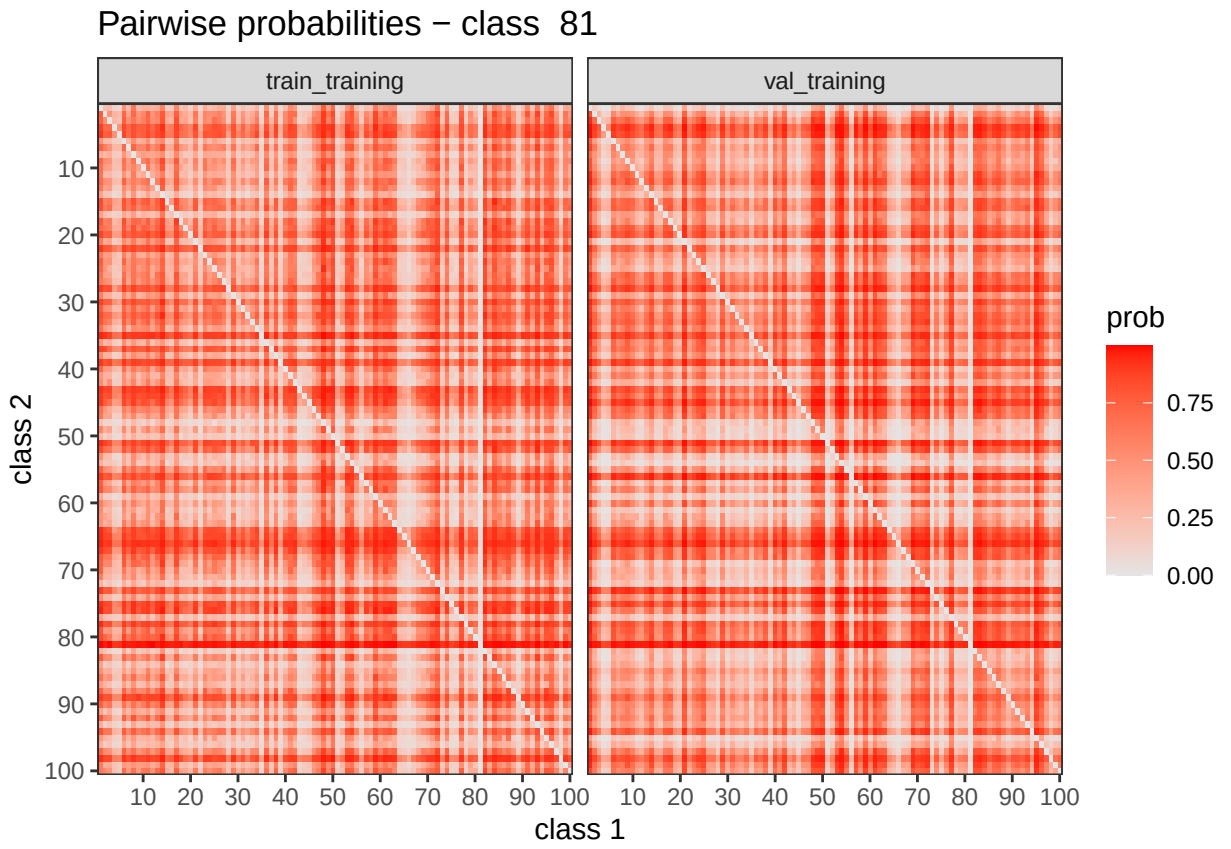

Pairwise probabilities − class 76
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

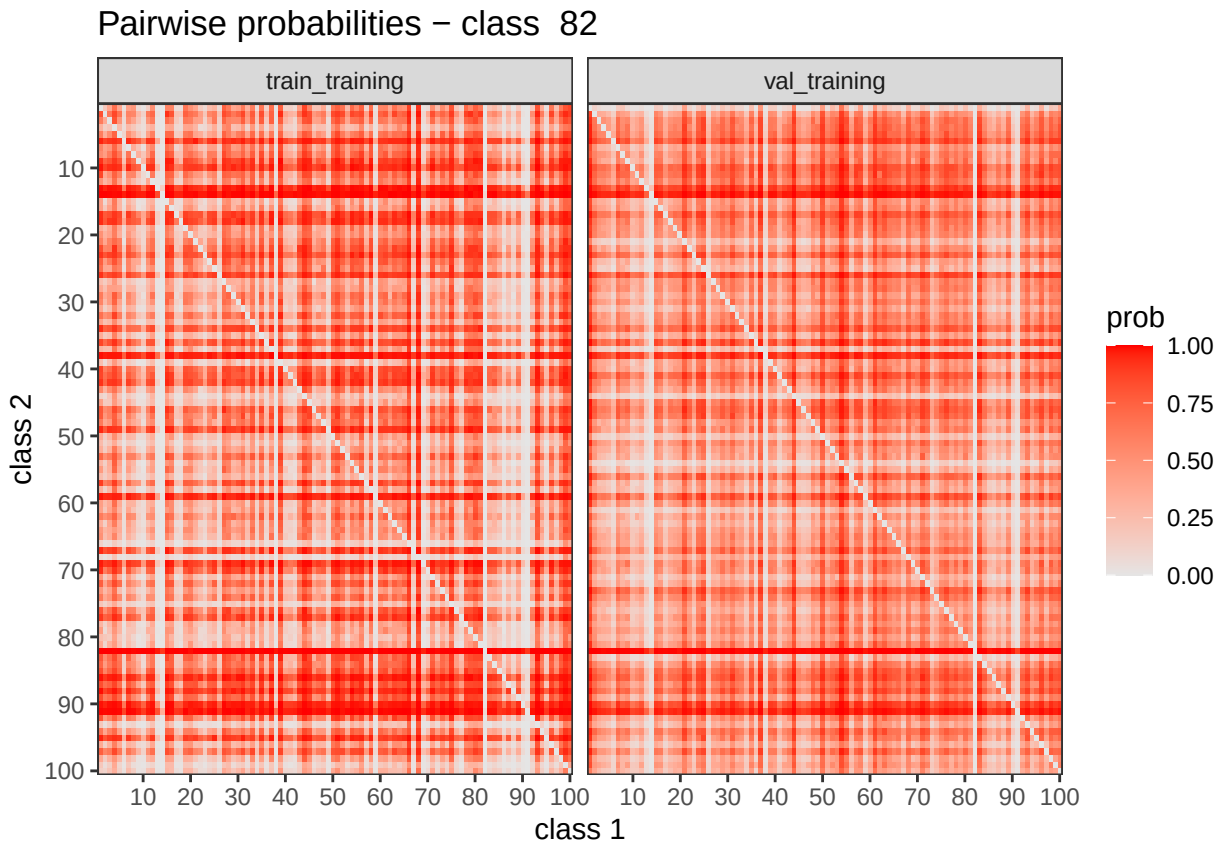

Pairwise probabilities − class 77
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

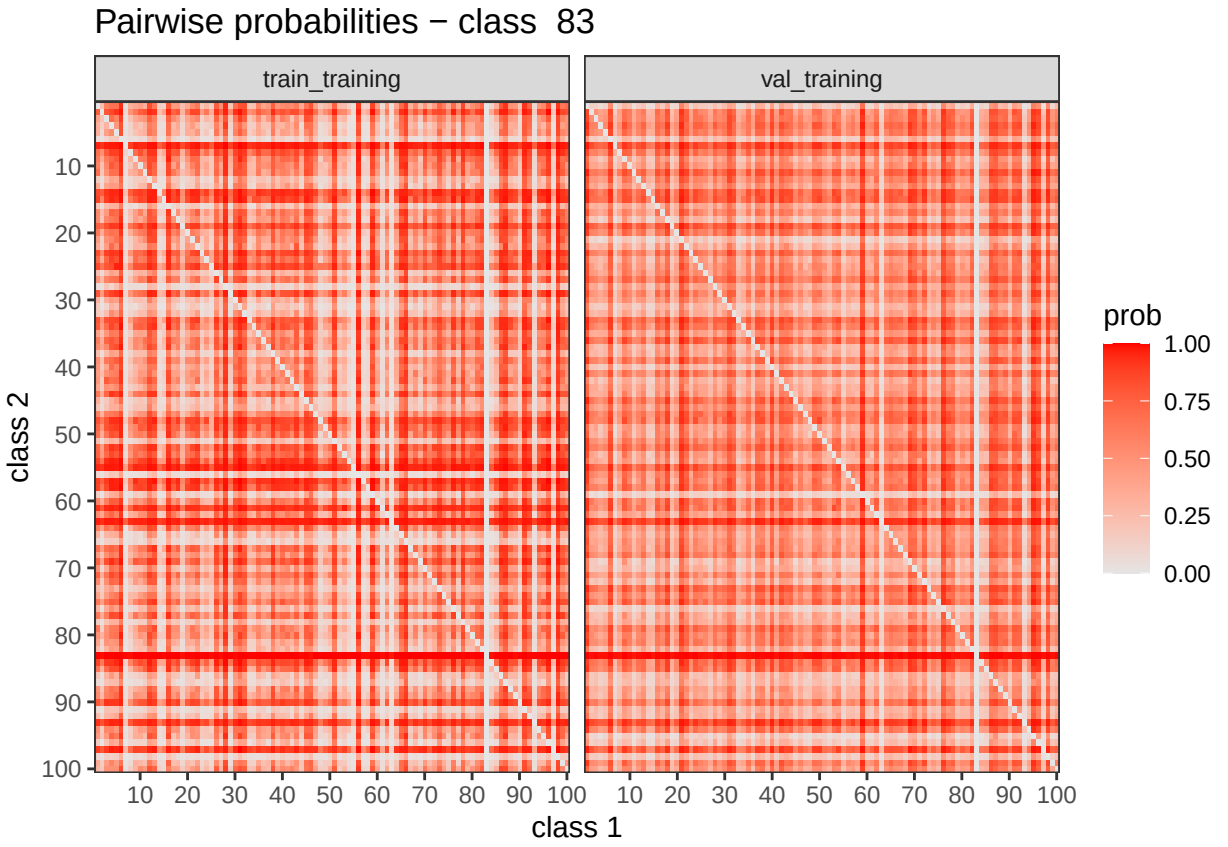

Pairwise probabilities − class 78
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

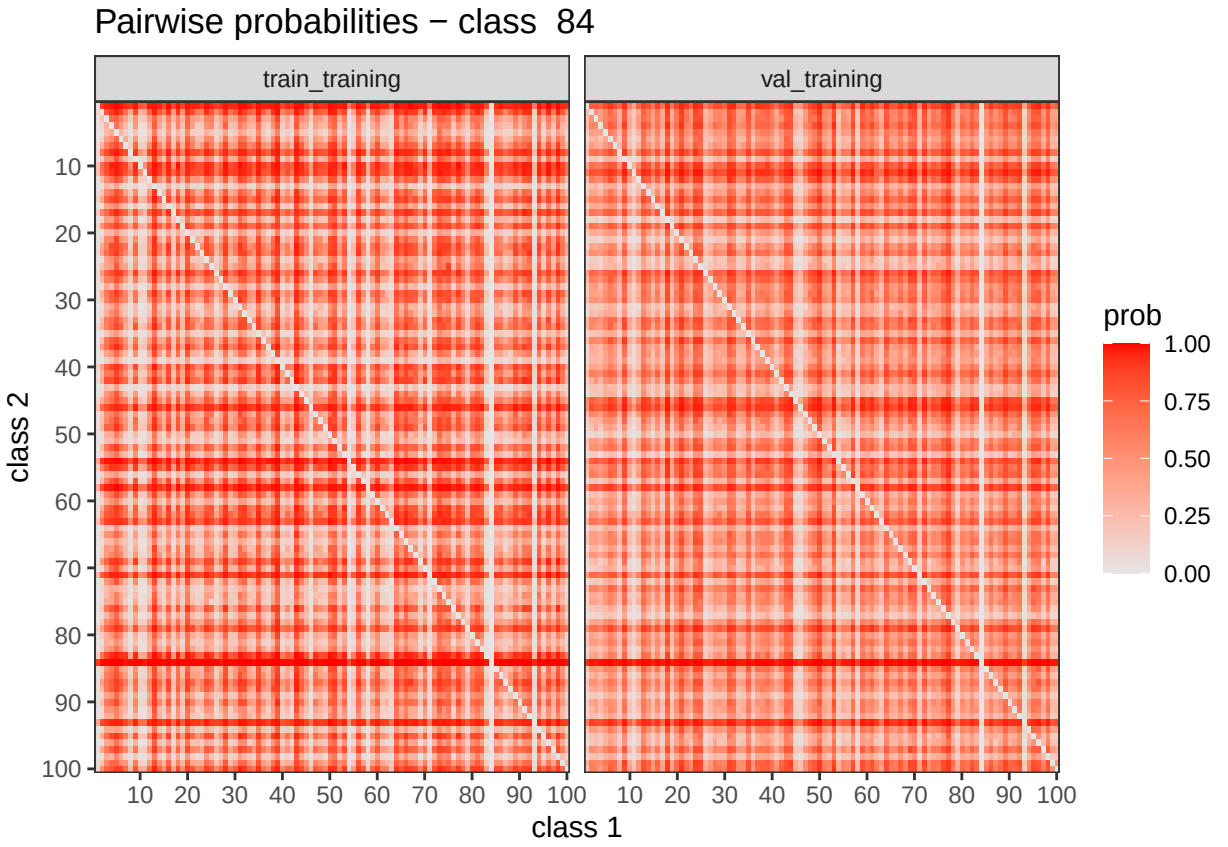

Pairwise probabilities − class 79
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

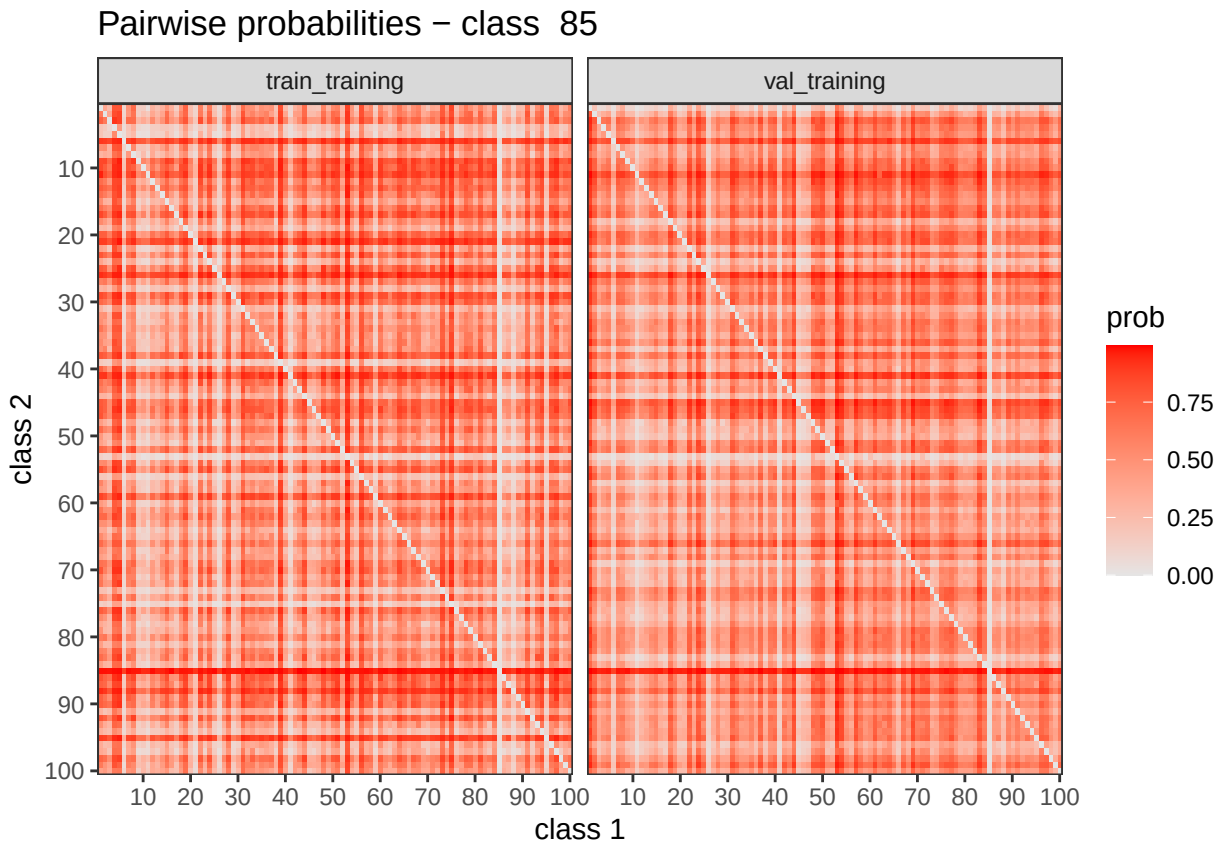

Pairwise probabilities − class 80
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

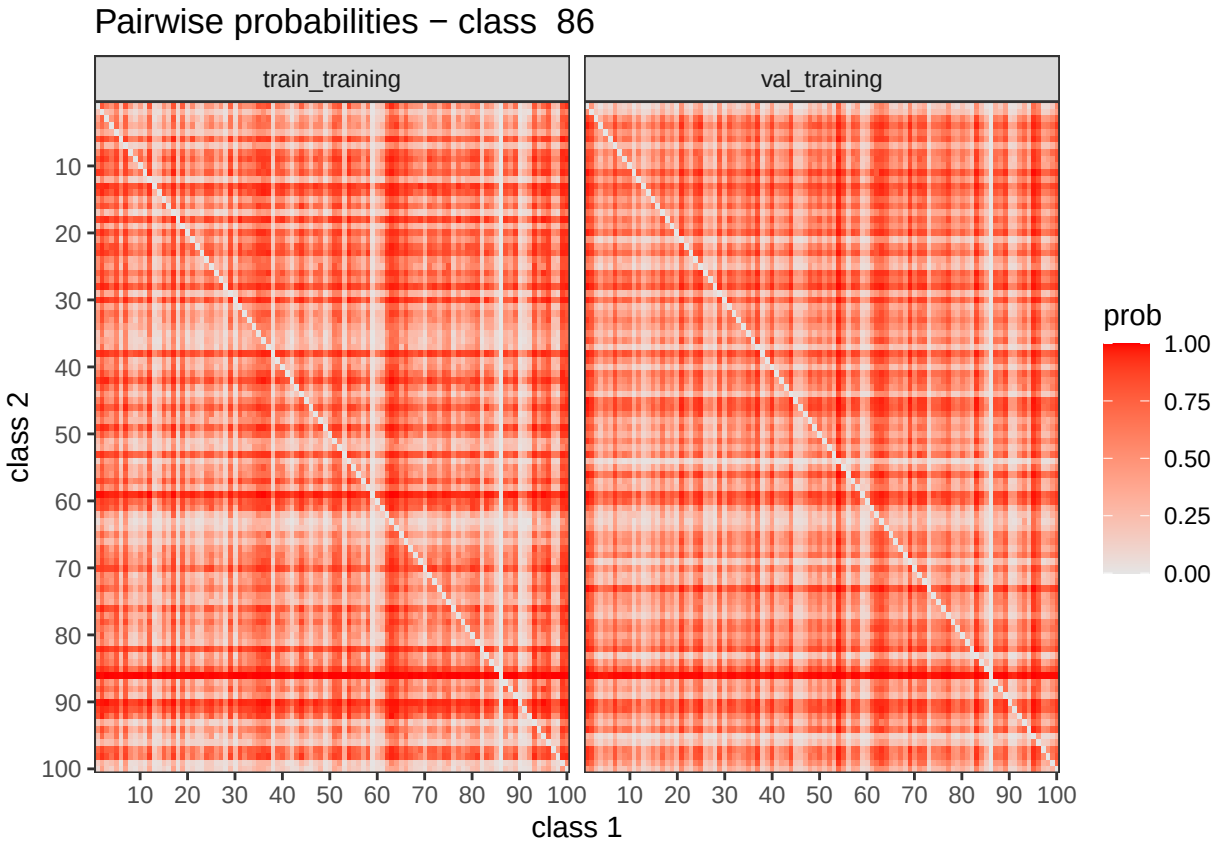

Pairwise probabilities − class 81
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

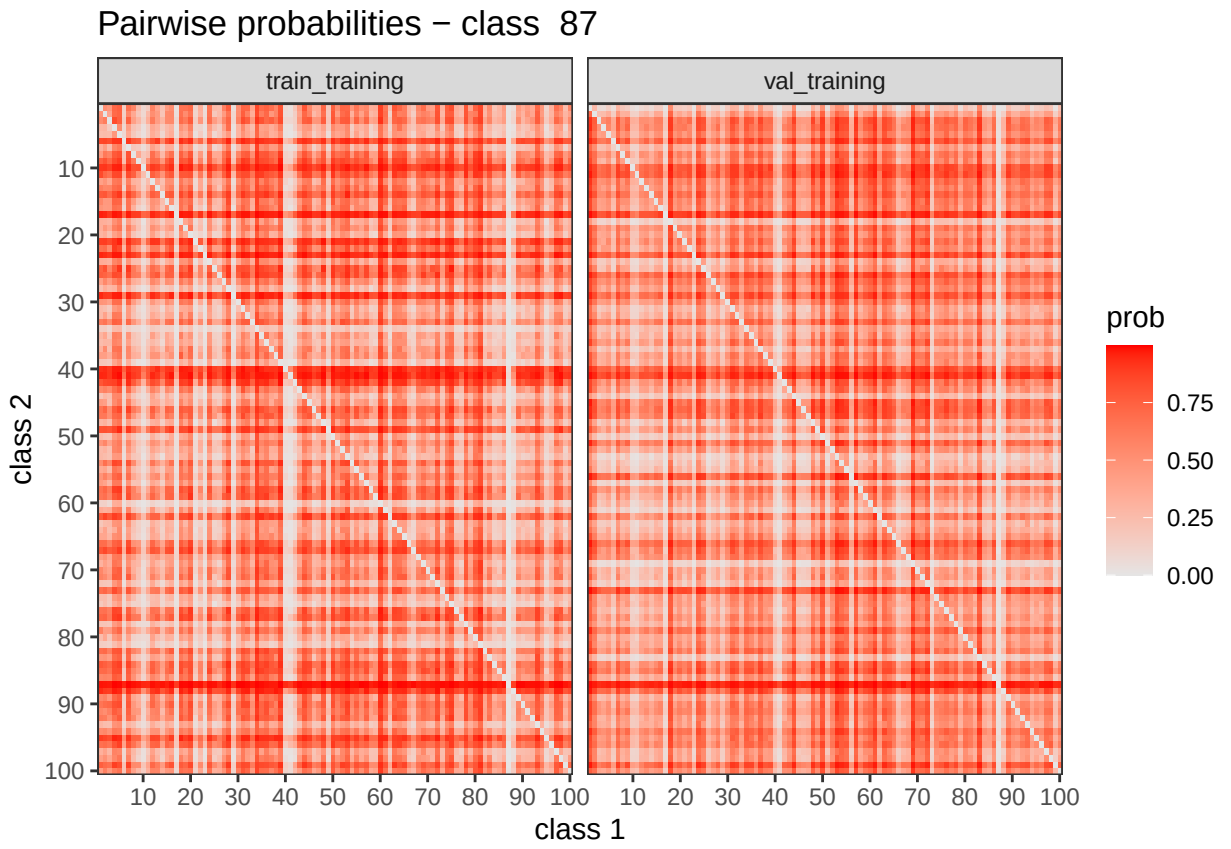

Pairwise probabilities − class 82
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

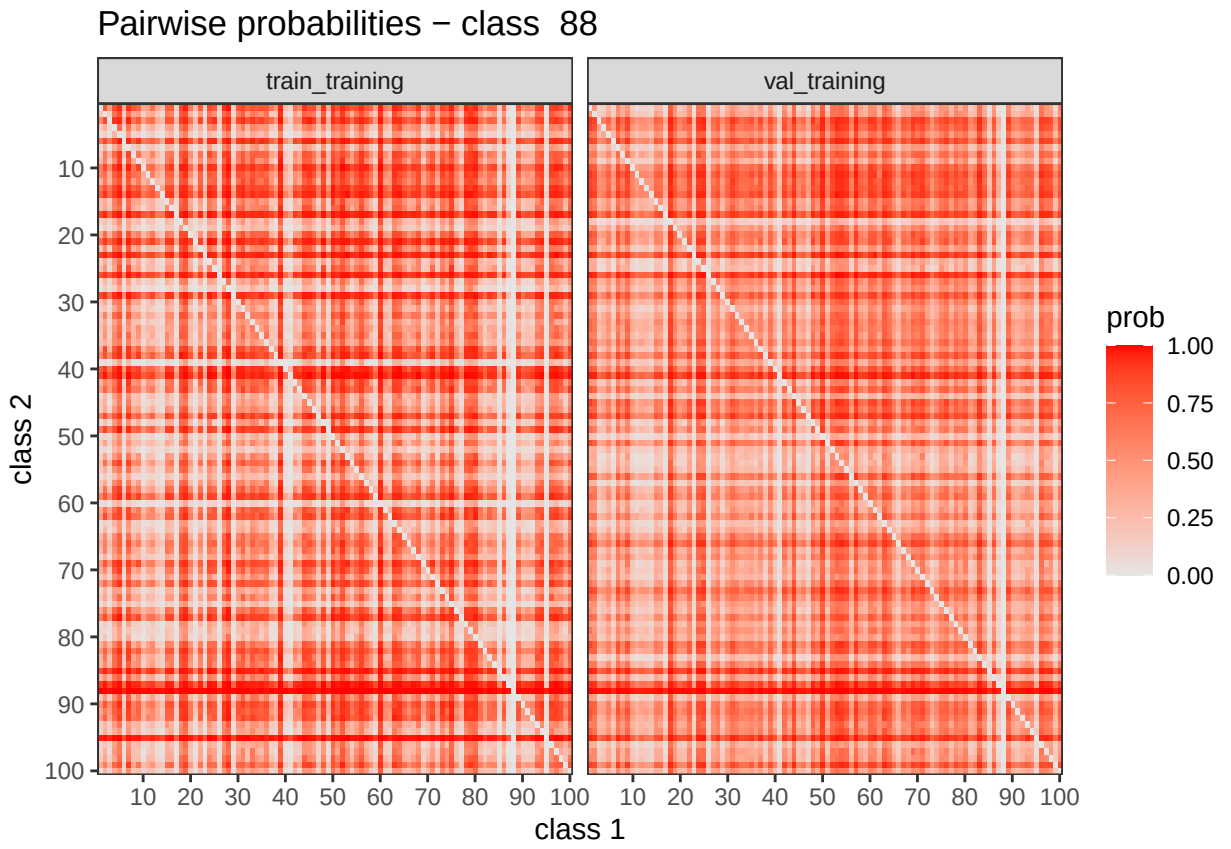

Pairwise probabilities − class 83
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

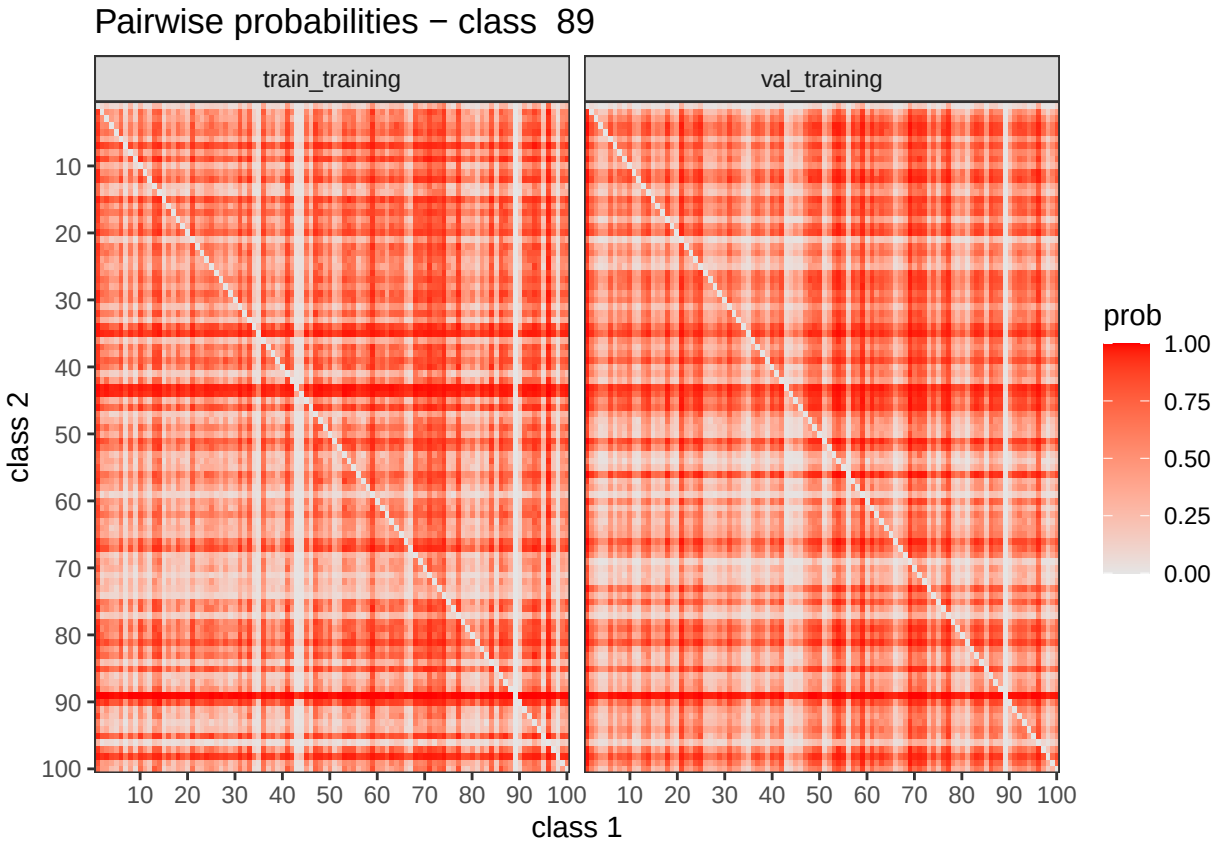

Pairwise probabilities − class 84
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

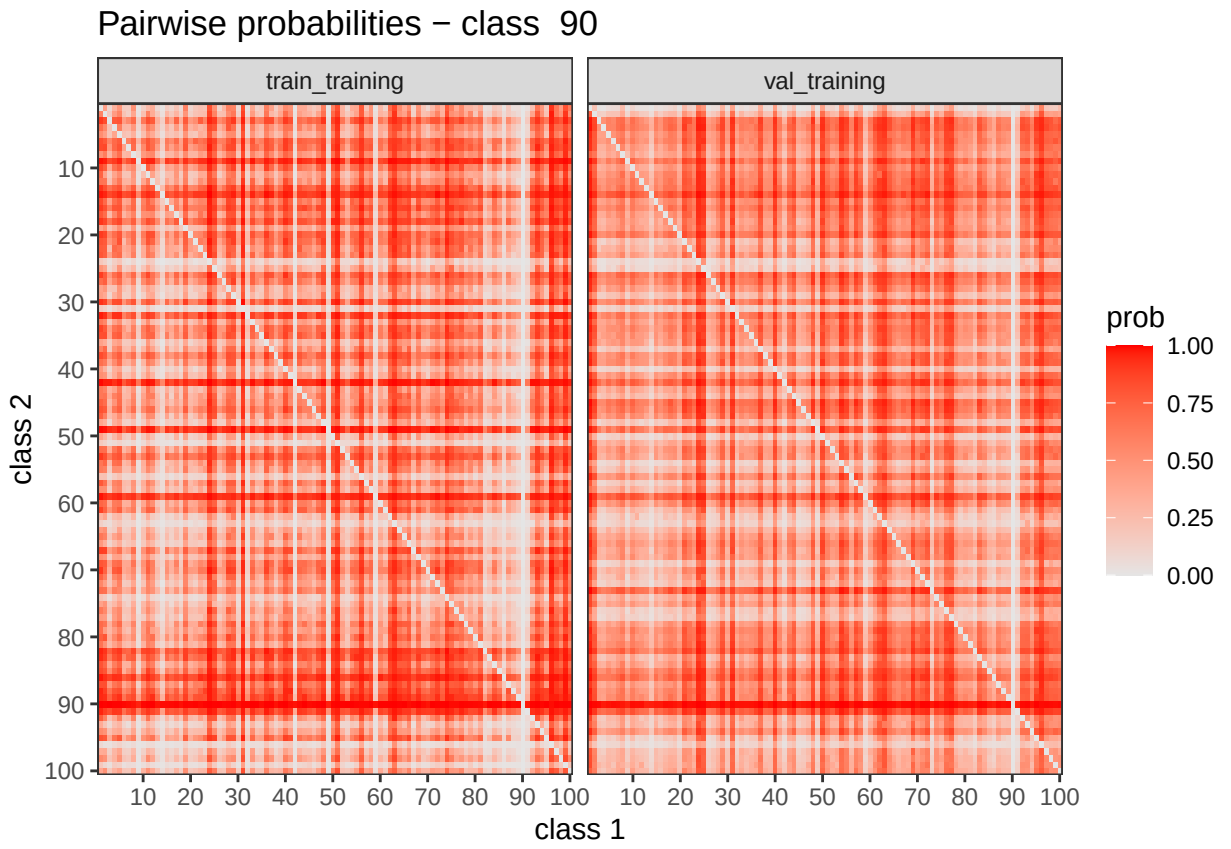

Pairwise probabilities − class 85
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

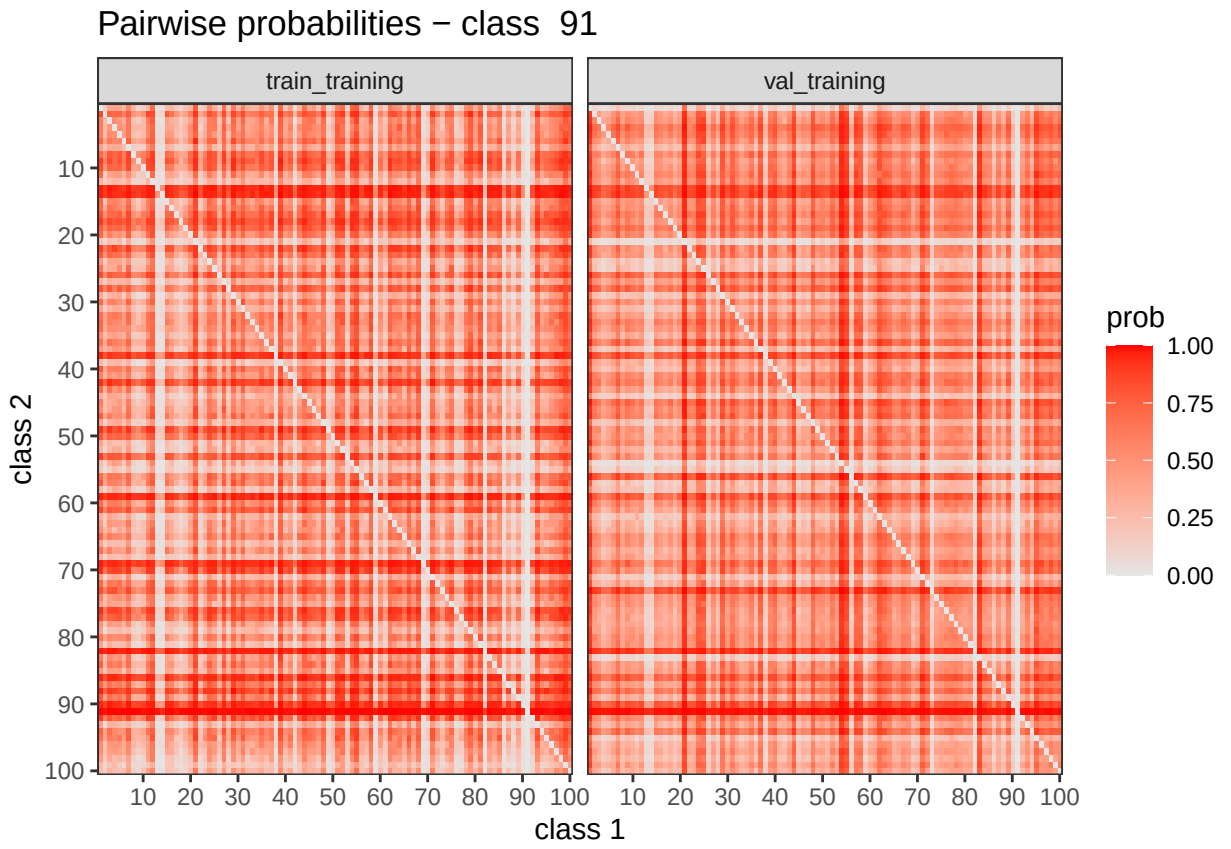

Pairwise probabilities − class 86
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

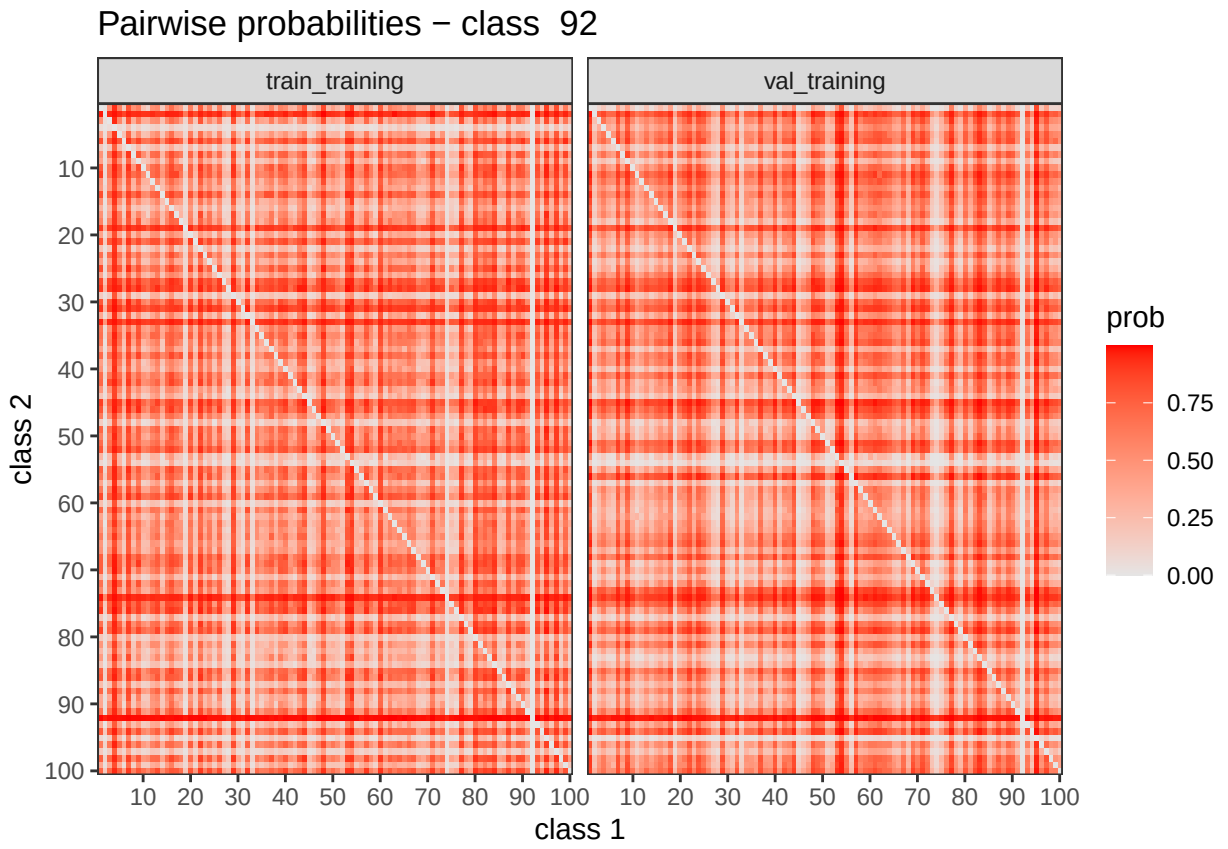

Pairwise probabilities − class 87
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

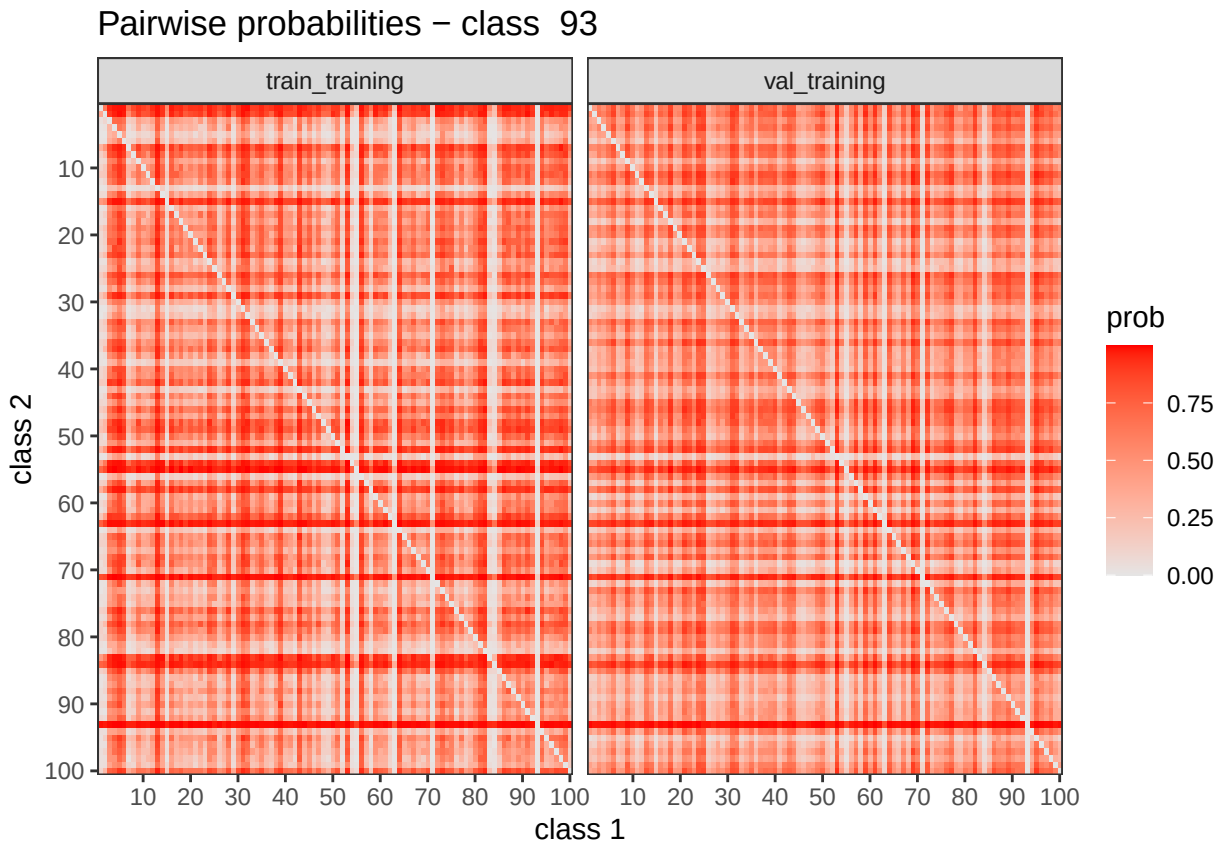

Pairwise probabilities − class 88
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

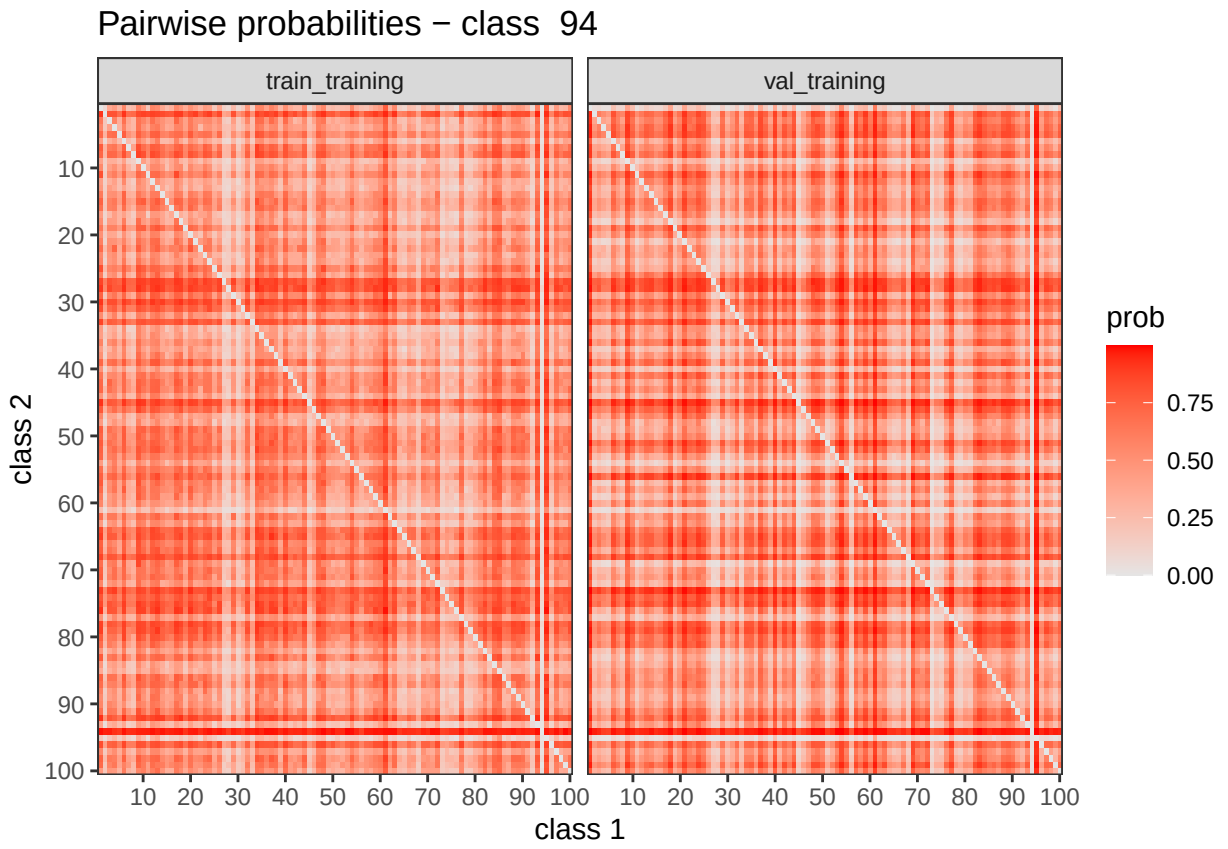

Pairwise probabilities − class 89
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

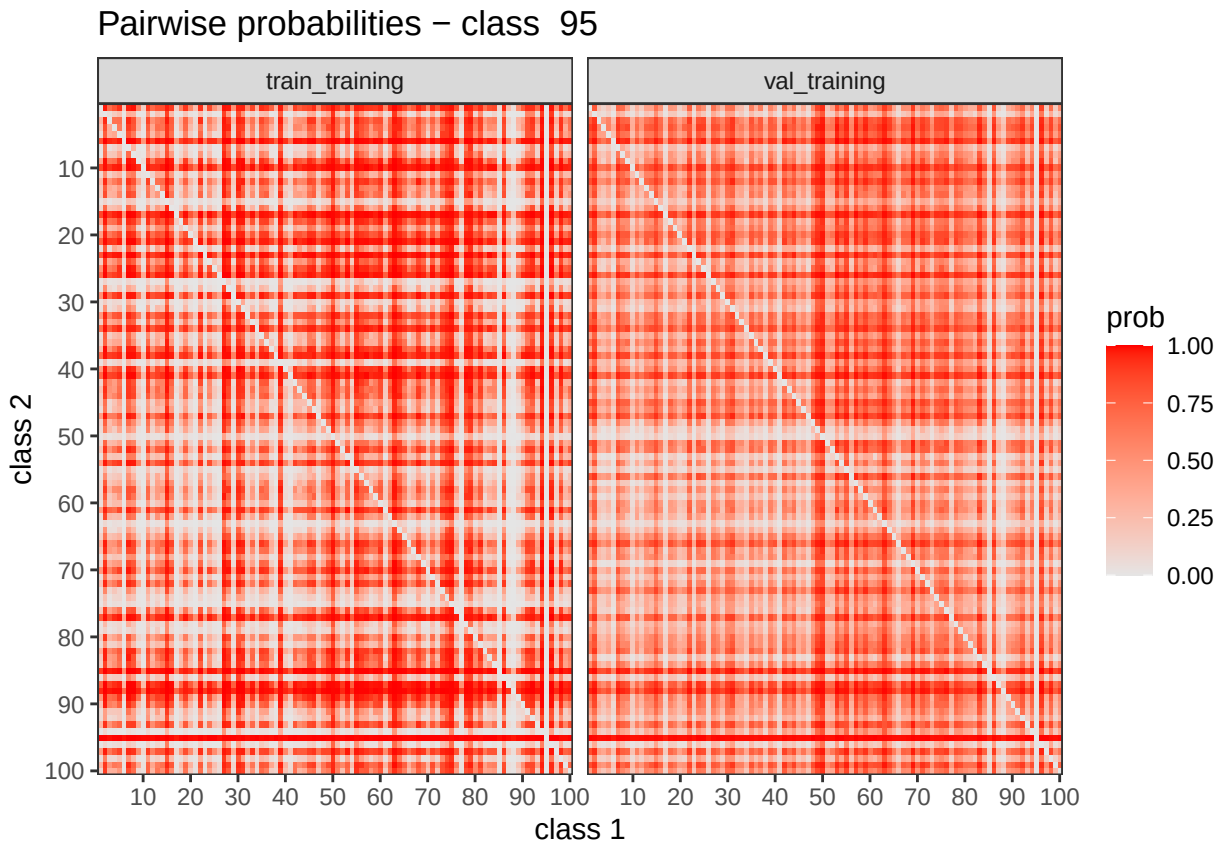

Pairwise probabilities − class 90
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

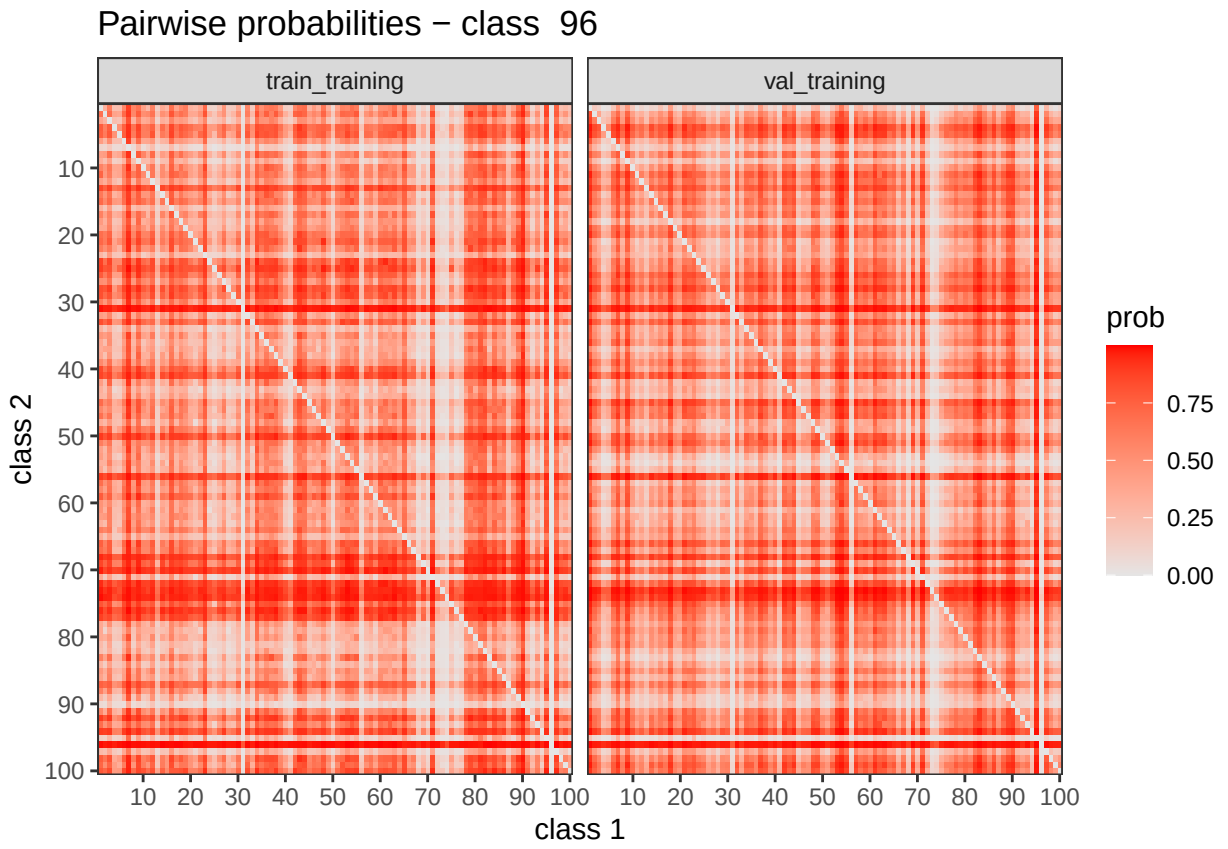

Pairwise probabilities − class 91
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00

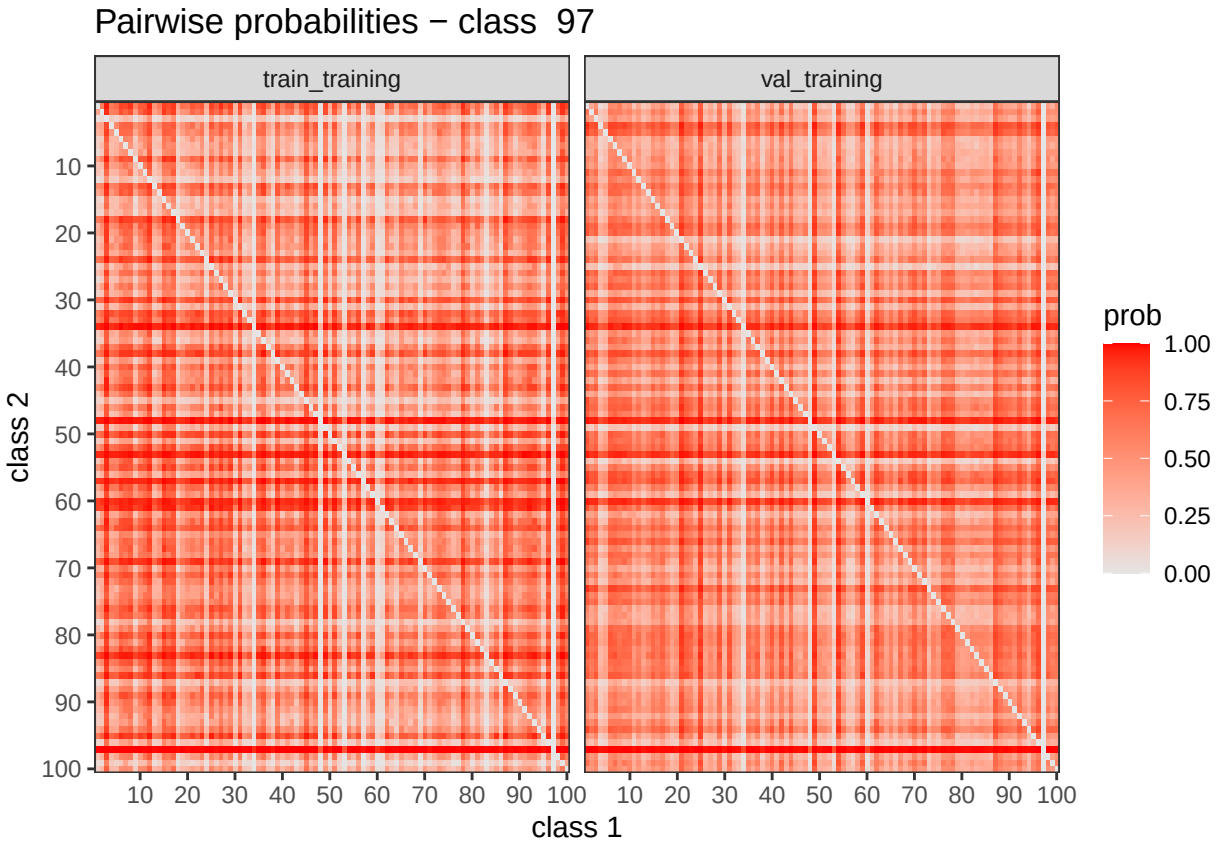

Pairwise probabilities − class 92
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

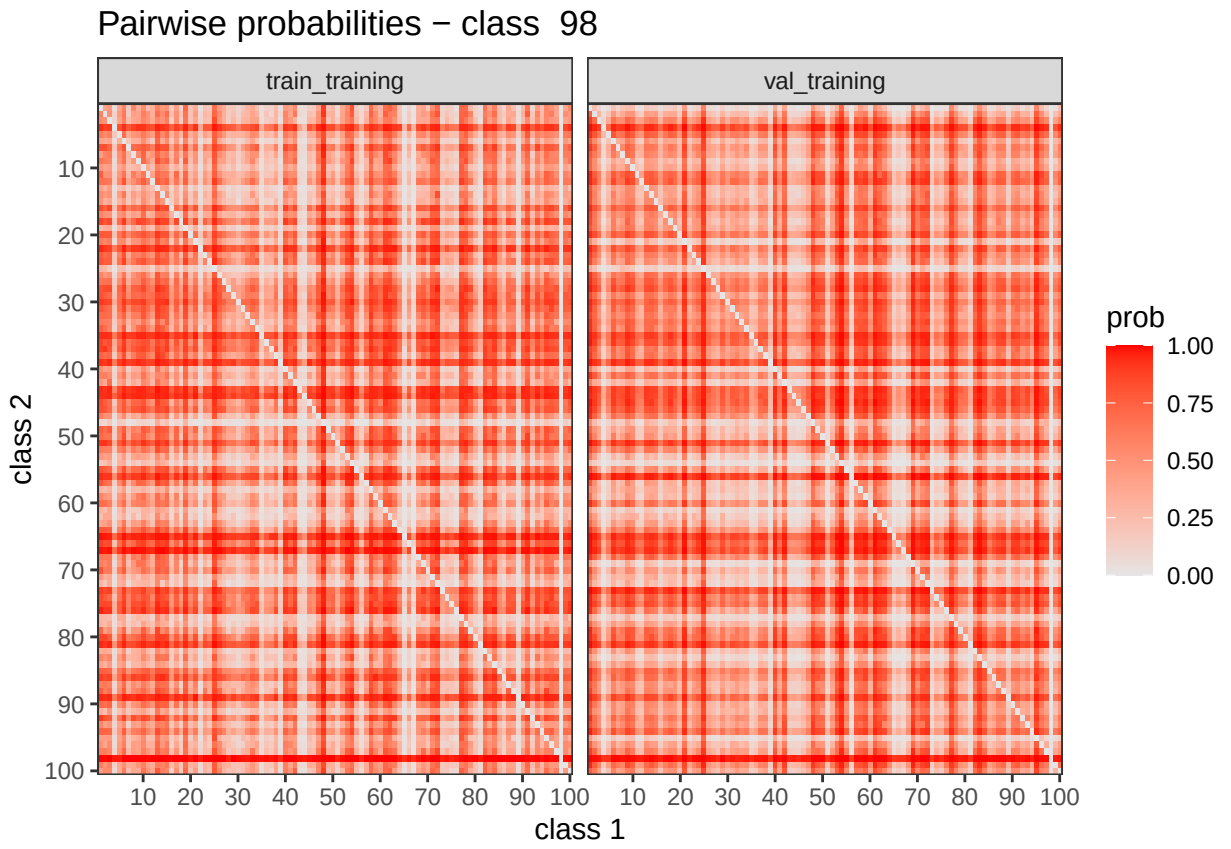

Pairwise probabilities − class 93
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

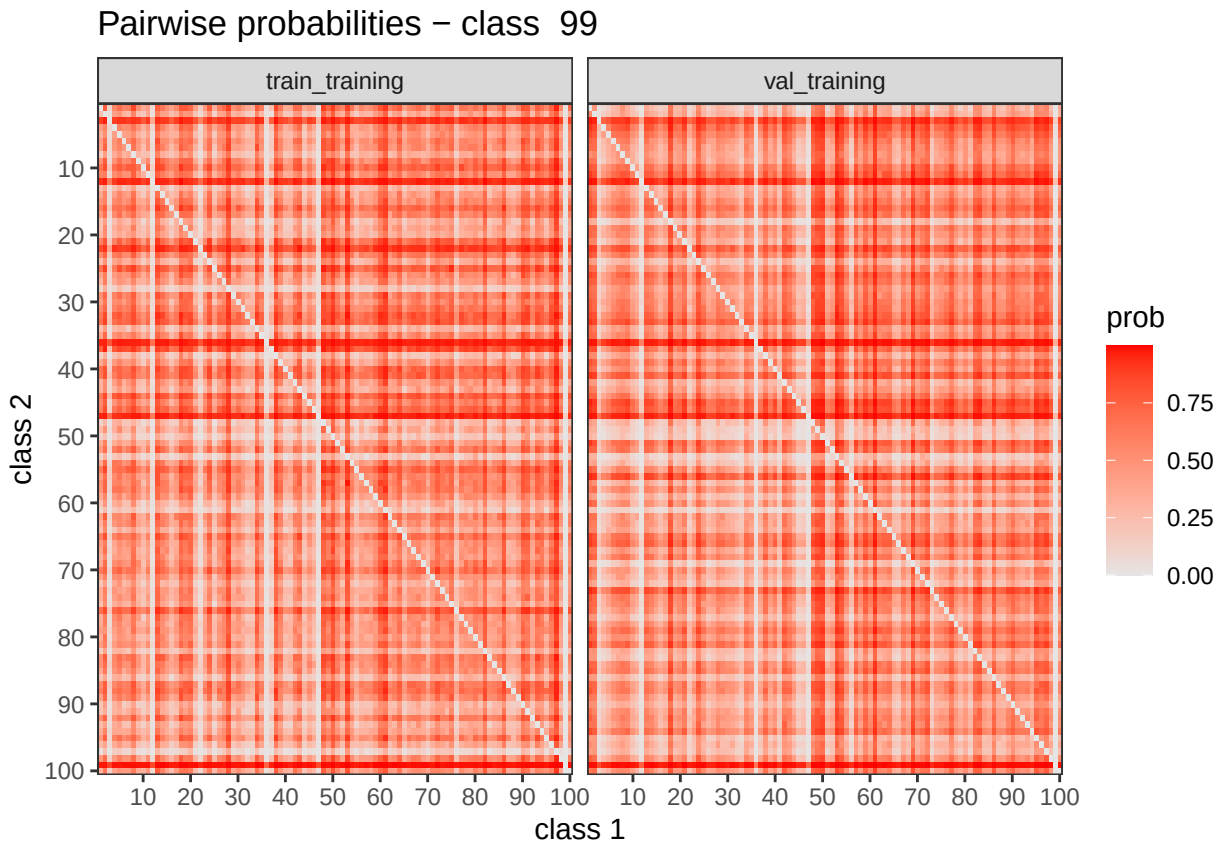

Pairwise probabilities − class 94
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00

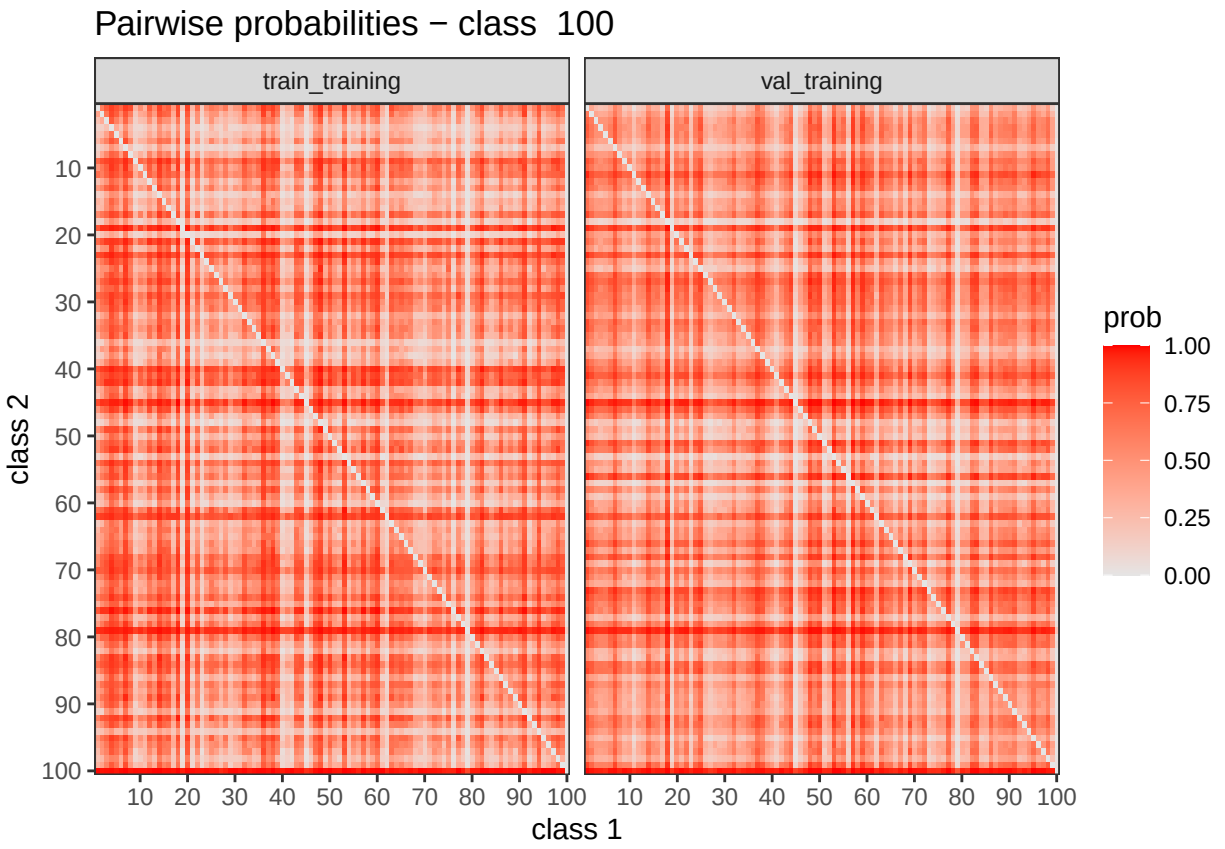

Pairwise probabilities − class 95
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00


Pairwise probabilities − class 96
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00


Pairwise probabilities − class 97
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00


Pairwise probabilities − class 98
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00


Pairwise probabilities − class 99
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
0.75
0.50
0.25
0.00


Pairwise probabilities − class 100
train_training
val_training
class 2
class 1
10
20
30
40
50
60
70
80
90
100
prob
1.00
0.75
0.50
0.25
0.00