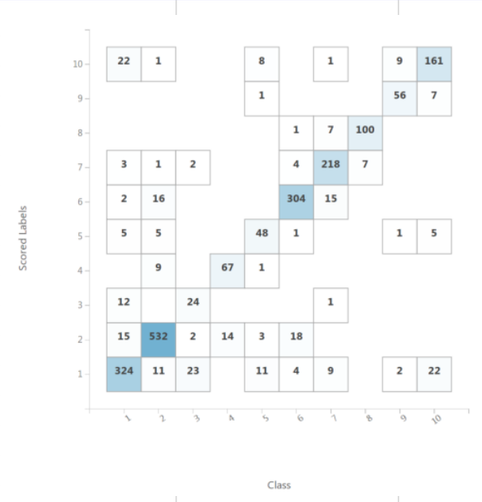
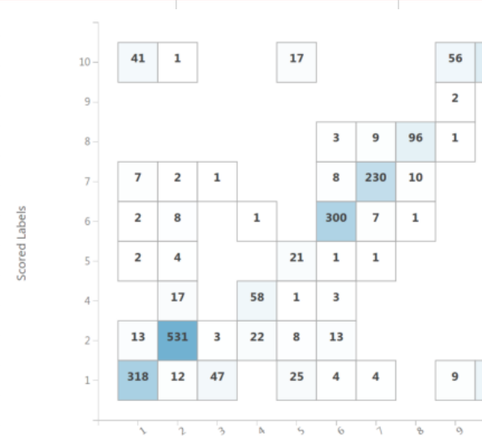
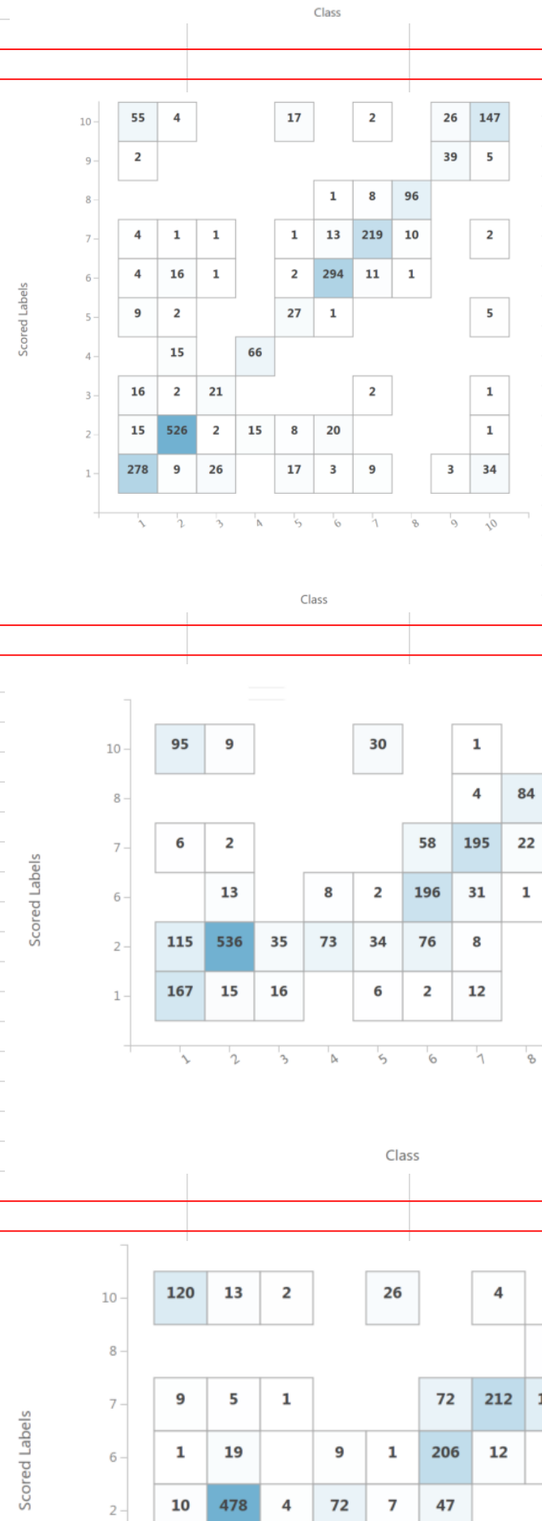
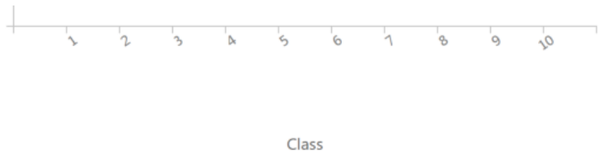
Name of run, name of algorithm	Parameters of algorithm	Value	Test/Training Split	Precision/Class	Value	Confusion Matrix
Neural Network Default Values	Hidden Nodes	100	10-fold X-validation	Precision for Class "1"	0.773417	
Multi Class Neural Network	Learning Rate	0.1		Precision for Class "2"	0.924275	
	Learning Iterations	100		Precision for Class "3"	0.626667	
Excercise: 4)a) "Parameters"	Initial learning weights diameter	0.1		Precision for Class "4"	0.815274	
	Momentum	0		Precision for Class "5"	0.732143	
	Normalization	Min-Max		Precision for Class "6"	0.920841	
	Shuffle examples	FALSE		Precision for Class "7"	0.925369	
	Random Number Seed	42		Precision for Class "8"	0.923503	
				Precision for Class "9"	0.92	
				Precision for Class "10"	0.657024	
				meanPrecision	**0.821851**	
				stdPrecision	0.112	
Neural Network Tuned Values	Hidden Nodes	125	10-fold X-validation	Precision for Class "1"	0.789396	
Multi Class Neural Network	Learning Rate	0.054096		Precision for Class "2"	0.914486	
	Learning Iterations	363		Precision for Class "3"	0.720476	
Excercise: 4)a) "Parameters"	Initial learning weights diameter	0.1		Precision for Class "4"	0.84619	
	Momentum	0.5		Precision for Class "5"	0.746389	
	Normalization	Min-Max		Precision for Class "6"	0.895452	
	Shuffle examples	FALSE		Precision for Class "7"	0.92034	
	Random Number Seed	42		Precision for Class "8"	0.911355	
				Precision for Class "9"	0.835354	
				Precision for Class "10"	0.816687	
				meanPrecision	**0.839613**	
				stdPrecision	0.068104	
Neural Network Bad Values 1	Hidden Nodes	**4**	10-fold X-validation	Precision for Class "1"	0.650047	
Multi Class Neural Network	Learning Rate	0.1		Precision for Class "2"	0.900285	
bad parameter value: hidden nodes too low	Learning Iterations	100		Precision for Class "3"	0	
> even lower than amount of output classes	Initial learning weights diameter	0.1		Precision for Class "4"	0.761825	
	Momentum	0		Precision for Class "5"	0.584762	
Excercise: 4)a) "Parameters"	Normalization	Min-Max		Precision for Class "6"	0.93741	
	Shuffle examples	FALSE		Precision for Class "7"	0.888398	
	Random Number Seed	42		Precision for Class "8"	0.885119	
				Precision for Class "9"	0.2	
				Precision for Class "10"	0.5589	
				meanPrecision	0.636675	
				stdPrecision	0.30094	

Neural Network Bad Values 2	Hidden Nodes	100	10-fold X-validation	Precision for Class "1"	0.738954
Multi Class Neural Network	Learning Rate	**0.99999999**		Precision for Class "2"	0.896405
bad parameter value: learning rate too high	Learning Iterations	100		Precision for Class "3"	0.469087
> local minima problem	Initial learning weights diameter	0.1		Precision for Class "4"	0.808669
	Momentum	0		Precision for Class "5"	0.675
Excercise: 4)a) "Parameters"	Normalization	Min-Max		Precision for Class "6"	0.896238
	Shuffle examples	FALSE		Precision for Class "7"	0.868689
	Random Number Seed	42		Precision for Class "8"	0.917383
				Precision for Class "9"	0.858929
				Precision for Class "10"	0.594051
				meanPrecision	0.772341
				stdPrecision	0.142906



Neural Network Bad Values 3	Hidden Nodes	100	10-fold X-validation	Precision for Class "1"	0.712124
Multi Class Neural Network	Learning Rate	0.1		Precision for Class "2"	0.614628
bad parameter value: learning iterations too low	Learning Iterations	**3**		Precision for Class "3"	0
> hardly any improvement	Initial learning weights diameter	0.1		Precision for Class "4"	0
	Momentum	0		Precision for Class "5"	0
Excercise: 4)a) "Parameters"	Normalization	Min-Max		Precision for Class "6"	0.810714
	Shuffle examples	FALSE		Precision for Class "7"	0.688626
	Random Number Seed	42		Precision for Class "8"	0.946389
				Precision for Class "9"	0
				Precision for Class "10"	0.473928
				meanPrecision	0.424641
				stdPrecision	0.365159

Neural Network Bad Values 4	Hidden Nodes	**3**	10-fold X-validation	Precision for Class "1"	0.537006
Multi Class Neural Network	Learning Rate	**0.8**		Precision for Class "2"	0.773863
a bad combination of the three factors above	Learning Iterations	**3**		Precision for Class "3"	0
-> result even worse	Initial learning weights diameter	0.1		Precision for Class "4"	0
	Momentum	0		Precision for Class "5"	0
Excercise: 4)a) "Parameters"	Normalization	Min-Max		Precision for Class "6"	0.90676
	Shuffle examples	FALSE		Precision for Class "7"	0.531135
	Random Number Seed	42		Precision for Class "8"	0.1
				Precision for Class "9"	0
				Precision for Class "10"	0.398968
				meanPrecision	0.324773
				stdPrecision	0.332559



Neural Network Bad Values 5	Hidden Nodes	100	10-fold X-validation	Precision for Class "1"	0.01564
Multi Class Neural Network	Learning Rate	0.1		Precision for Class "2"	0.244369
no normalization used	Learning Iterations	100		Precision for Class "3"	0
	Initial learning weights diameter	0.1		Precision for Class "4"	0
Excercise: 4)a) "Parameters"	Momentum	0		Precision for Class "5"	0
	Normalization	None		Precision for Class "6"	0
	Shuffle examples	FALSE		Precision for Class "7"	0
	Random Number Seed	42		Precision for Class "8"	0
				Precision for Class "9"	0
				Precision for Class "10"	0
				meanPrecision	0.026001
				stdPrecision	0.072938