

## Report of ANN Configurations and corresponding Accuracy, Precision, Recall, F1-score on Train and Test data

	A	B	C	D	E	F	G	H	I	J
1	Model number / Configurations	Configurations	Accuracy		Precision		Recall		F1-score	
2			Train Set	Test Set	Train Set	Test Set	Train Set	Test Set	Train Set	Test Set
3	ANN-1	11x10, ReLU 10x5,ReLU 5x4,ReLU 5x1,Sigmoid Epoch=100, scaling=yes, optimizer=adam, dropout=no, kernelinitializer=no	87.9	86	87	87	98	97	92	92
4	ANN-1 with dropout	11x10, ReLU 10x5,ReLU 5x4,ReLU 5x1,Sigmoid Epoch=100, scaling=yes, optimizer=sgd, dropout=yes (0.1 %), kernelinitializer=no	85.7	85.61	87	87	98	97	92	91
5	ANN-2	11x11, ReLU 11x9,ReLU 9x5, ReLU 5x3, Sigmoid 3x1, Sigmoid Epoch=100000, scaling=yes, optimizer=adam, dropout=no, kernelinitializer=he_normal	88.58	84.67	90	87	96	95	93	91
6	ANN-3	11x12,ReLU 12x12,ReLU 5x1,Sigmoid Epoch=128, scaling=yes, optimizer=adam, dropout=no, kernelinitializer=uniform	86.24	85.56	88	88	96	95	92	91
7	ANN-4	11x24, ReLU 24x24,ReLU 24x24,ReLU 24x1,Sigmoid Epoch=250, scaling=yes, optimizer=adam, dropout=no, kernelinitializeruniform	86.81	85.67	88	87	97	96	92	91
8	ANN-5	11x48, ReLU 48x24,Sigmoid 24x12,Sigmoid 12x1,Sigmoid Epoch=250, scaling=yes, optimizer=adam, dropout=no, kernelinitializer=uniform	92.99	81.61	95	88	97	89	96	88
9	ANN-6	11x6, ReLU 6x6,ReLU 6x1,Sigmoid Epoch=100, scaling=yes, optimizer=adam, dropout=no, kernelinitializer=uniform	87.03	85.78	88	87	97	96	92	91

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		11x16, ReLU 16x8,ReLU 8x4,ReLU 4x2,ReLU 2x1,Sigmoid Epoch=50, scaling=yes, optimizer=sgd, dropout=no, kernelinitializer=uniform								
10	ANN-7		85.69	85.39	89	88	95	94	92	91
11	ANN-8	11x16, ReLU 16x1,Sigmoid Epoch=100, scaling=yes, optimizer=sgd, dropout=no, kernelinitializer=uniform	86.11	85.83	89	89	95	94	91	91
12	ANN-9	11x6, tanh 6x12,tanh 12x1,ReLU Epoch=50, scaling=yes, optimizer=adam, dropout=no, kernelinitializer=no	81.54	76.17	82	82	89	90	86	86
13	ANN-10	11x48, ReLU 48x24,ReLU 24x12,ReLU 12x6,ReLU 6x3,ReLU 3x1,Sigmoid Epoch=150, scaling=yes, optimizer=adam, dropout=yes(0.1%), kernelinitializer=no	88.96	85.39	92	88	98	94	95	91
14	ANN-11	11x11, ReLU 11x9,ReLU 9x5,ReLU 5x3,ReLU 3x1,Sigmoid Epoch=500, scaling=yes, optimizer=sgd, dropout=yes(0.1%), kernelinitializer=no	86.6	84.78	87	86	98	97	92	91
15	ANN-12	11x16, ReLU 16x8,ReLU 8x1,Softmax Epoch=50, scaling=yes, optimizer=sgd, dropout=no, kernelinitializer=no	20.35	20.34	0	0	0	0	0	0

*From the above report table, we can conclude that model ANN-1 shows better performance with accuracy 86% and hence I am using the same to predict judge.csv dataset.*