	Número de camadas escondidas	Número de neurónios	Funções de ativação	Função de treino	Divisão dos exemplos	Número de Épocas	Precisão Global	Precisão Teste	Melhor Teste	
Configuração por defeito	1	10	tansig, purelin	trainlm	dividerand = {0.7, 0.15, 0.15}	20	98,8	95,7		
Alínea A) ii Mudar topologia - Start										
Conf1	1	10	tansig, purelin	trainlm	100% Treino	20	100.00%	NaN		
Conf2	1	30	tansig, purelin	trainIm	100% Treino	20	100.00%	NaN		
Conf3	2	10, 10	tansig, tansig, purelin	trainIm	100% Treino	20	100.00	NaN	-	
Conf4	2	30, 30	tansig, tansig, purelin	trainIm	100% Treino	20	100.00	NaN	-	
Conf5	2	10, 30	tansig, tansig, purelin	trainIm	100% Treino	20	100.00	NaN		
Alínea A) iii Mudar topologia - Start										
Conf1	1	10	tansig, purelin	trainIm	dividerand = {0.7, 0.15, 0.15}	20	80.00% (±6. 67)	40.00% (±0. 00)	40.00%	
Conf2	1	30	tansig, purelin	trainIm	dividerand = {0.7, 0.15, 0.15}	20	79.33% (±3. 65)	28.00% (±22. 80)	60.00%	
Conf3	2	10, 10	tansig, tansig, purelin	trainIm	dividerand = {0.7, 0.15, 0.15}	20	66.00% (±14. 79)	28.00% (±17. 89)	40.00%	

Conf4	2	30, 30	tansig, tansig, purelin	trainlm	dividerand = {0.7, 0.15, 0.15}	20	78.67% (±1. 83)	32.00% (±10. 95)	40.00%		
Conf5	2	10, 30	tansig, tansig, purelin	trainlm	dividerand = {0.7, 0.15, 0.15}	20	76.00% (±6. 83)	32.00% (±30. 33)	80.00%		
Alínea B) - diferentes topologias: número de neurónios e número de camadas - Train											
Conf1	1	10	tansig, purelin	trainIm	dividerand = {0.7, 0.15, 0.15}	20	90.33% (±2. 32)	68.44% (±10. 93)	86.67%		
Conf2	1	30	tansig, purelin	trainIm	dividerand = {0.7, 0.15, 0.15}	20	90.47% (±0. 80)	63.11% (±6. 96)	73.33%		
Conf3	2	10, 10	tansig, tansig, purelin	trainIm	dividerand = {0.7, 0.15, 0.15}	20	89.53% (±2. 12)	70.67% (±4. 82)	77.78%		
Conf4	2	30, 30	tansig, tansig, purelin	trainlm	dividerand = {0.7, 0.15, 0.15}	20	91.13% (±1. 02)	66.67% (±4. 16)	71.11%		
Conf5	2	10, 30	tansig, tansig, purelin	trainIm	dividerand = {0.7, 0.15, 0.15}	20	89.20% (±2. 58)	60.44% (±9. 08)	75.56%		
Aliman D) diferentes funciones de atimo de Tueiro											
Alínea B) - diferentes funções de ativação - Train											
Conf1	1	10	logsig, purelin	trainlm	dividerand = {0.7, 0.15, 0.15}	20	90.47% (±2. 91)	72.89% (±3. 98)	77.78%		
Conf2	1	10	tansig, purelin	trainIm	dividerand = {0.7, 0.15, 0.15}	20	91.33% (±2. 35)	69.33% (±6. 74)	77.78%		
Conf3	1	10	purelin, purelin	trainlm	dividerand = {0.7, 0.15, 0.15}	20	71.07% (±24. 29)	57.33% (±15. 51)	77.78%		
Conf4	1	10	softmax, purelin	trainlm	dividerand = {0.7, 0.15, 0.15}	20	65.80% (±20. 21)	52.44% (±16. 67)	73.33%		
								•	, 5.55, 3		

		Alínea Pi	\ diforentes func	ãos do troir	o Train			
		Allilea b) - diferentes funç	bes de treil	io - Italii			
					dividerand = {0.7,		89.07% (±2.	68.44% (±3.
Conf1	1	10	tansig, purelin	trainIm	0.15, 0.15}	20	13)	65)
					dividerand = {0.7,		21.40% (±5.	23.56% (±6.
Conf2	1	10	tansig, purelin	traingd	0.15, 0.15}	20	02)	40)
					dividerand = {0.7,		46.60% (±3.	40.00% (±3.
Conf3	1	10	tansig, purelin	trainscg	0.15, 0.15}	20	52)	51)
					dividerand = {0.7,		25.13% (±7.	21.33% (±10.
Conf4	1	10	tansig, purelin	trainrp	0.15, 0.15}	20	73)	95)
								i
	Alíneo D\	diferentes		sas tusins /		Tuein		
	Alinea B)	- airerentes	rácios de divisão e	em treino/v	alidação/teste -	irain		
					distributed to a		00.070//12	CO 440/ /12
Conf1	1	10	tancia nurolin	trainIm	dividerand = {0.7,	20	89.07% (±2.	68.44% (±3.
Conf1	1	10	tansig, purelin	trainIm	0.15, 0.15}	20	13)	65)
					0.15, 0.15} dividerand = {0.8,		13) 93.67% (±1.	65) 74.67% (±7.
Conf1 Conf2	1	10	tansig, purelin	trainlm trainlm	0.15, 0.15} dividerand = {0.8, 0.1, 0.1}	20	13) 93.67% (±1. 13)	65) 74.67% (±7. 30)
Conf2	1	10	tansig, purelin	trainlm	0.15, 0.15} dividerand = {0.8,	20	13) 93.67% (±1. 13) 86.00% (±1.	65) 74.67% (±7. 30) 64.33% (±5.
					0.15, 0.15} dividerand = {0.8,		13) 93.67% (±1. 13) 86.00% (±1. 75)	65) 74.67% (±7. 30) 64.33% (±5. 35)
Conf2	1	10 10	tansig, purelin	trainlm trainlm	0.15, 0.15} dividerand = {0.8,	20	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1.	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4.
Conf2	1	10	tansig, purelin	trainlm	0.15, 0.15} dividerand = {0.8,	20	13) 93.67% (±1. 13) 86.00% (±1. 75)	65) 74.67% (±7. 30) 64.33% (±5. 35)
Conf2	1	10 10 10	tansig, purelin tansig, purelin tansig, purelin	trainlm trainlm trainlm	0.15, 0.15} dividerand = {0.8,	20	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1.	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4.
Conf2	1	10 10 10	tansig, purelin	trainlm trainlm trainlm	0.15, 0.15} dividerand = {0.8,	20	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1.	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4.
Conf2	1	10 10 10	tansig, purelin tansig, purelin tansig, purelin	trainlm trainlm trainlm	0.15, 0.15} dividerand = {0.8,	20	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1.	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4.
Conf2	1	10 10 10	tansig, purelin tansig, purelin tansig, purelin	trainlm trainlm trainlm	0.15, 0.15} dividerand = {0.8,	20	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1. 35)	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4. 94)
Conf2 Conf3 Conf4	1 1	10 10 10	tansig, purelin tansig, purelin tansig, purelin	trainIm trainIm trainIm épocas - Tra	0.15, 0.15} dividerand = {0.8,	20 20 20	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1. 35)	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4. 94)
Conf2 Conf3 Conf4	1 1	10 10 10	tansig, purelin tansig, purelin tansig, purelin	trainIm trainIm trainIm épocas - Tra	0.15, 0.15} dividerand = {0.8,	20 20 20	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1. 35) 87.38% (±8. 13)	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4. 94) 66.44% (±10. 06)
Conf2 Conf3 Conf4 Conf1	1 1 1	10 10 10 M	tansig, purelin tansig, purelin tansig, purelin ludar número de é tansig, purelin	trainIm trainIm trainIm pocas - Tra trainIm	0.15, 0.15} dividerand = {0.8,	20 20 20	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1. 35) 87.38% (±8. 13) 88.67% (±4.	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4. 94) 66.44% (±10. 06) 65.76% (±7.
Conf2 Conf3 Conf4 Conf1	1 1 1	10 10 10 M	tansig, purelin tansig, purelin tansig, purelin ludar número de é tansig, purelin	trainIm trainIm trainIm pocas - Tra trainIm	0.15, 0.15} dividerand = {0.8,	20 20 20	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1. 35) 87.38% (±8. 13) 88.67% (±4. 58)	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4. 94) 66.44% (±10. 06) 65.76% (±7. 71)
Conf2 Conf3 Conf4 Conf1 Conf2	1 1 1	10 10 10 M	tansig, purelin tansig, purelin tansig, purelin udar número de é tansig, purelin tansig, purelin	trainIm trainIm trainIm pocas - Tra trainIm trainIm	0.15, 0.15} dividerand = {0.8,	20 20 20 20 40	13) 93.67% (±1. 13) 86.00% (±1. 75) 76.53% (±1. 35) 87.38% (±8. 13) 88.67% (±4. 58) 89.93% (±1.	65) 74.67% (±7. 30) 64.33% (±5. 35) 61.56% (±4. 94) 66.44% (±10. 06) 65.76% (±7. 71) 68.00% (±5.

Mudar a pasta de imagens para treino

					dividerand = {0.7,		73.33% (±12.	32.00% (±17.	
Conf1 - Start	1	10	tansig, purelin	trainlm	0.15, 0.15}	20	69)	89)	
					dividerand = {0.7,		85.00% (±2.	55.56% (±11.	
Conf2 - Test	1	10	tansig, purelin	trainlm	0.15, 0.15}	20	64)	11)	
					dividerand = {0.7,		89.40% (±1.	63.11% (±3.	
Conf3 - Train	1	10	tansig, purelin	trainlm	0.15, 0.15}	20	42)	37)	
					dividerand = {0.7,		89.03% (±2.	68.47% (±7.	
Conf4 - All	1	10	tansig, purelin	trainlm	0.15, 0.15}	20	47)	91)	

60.00%

66.67%

69.67%

79.66%