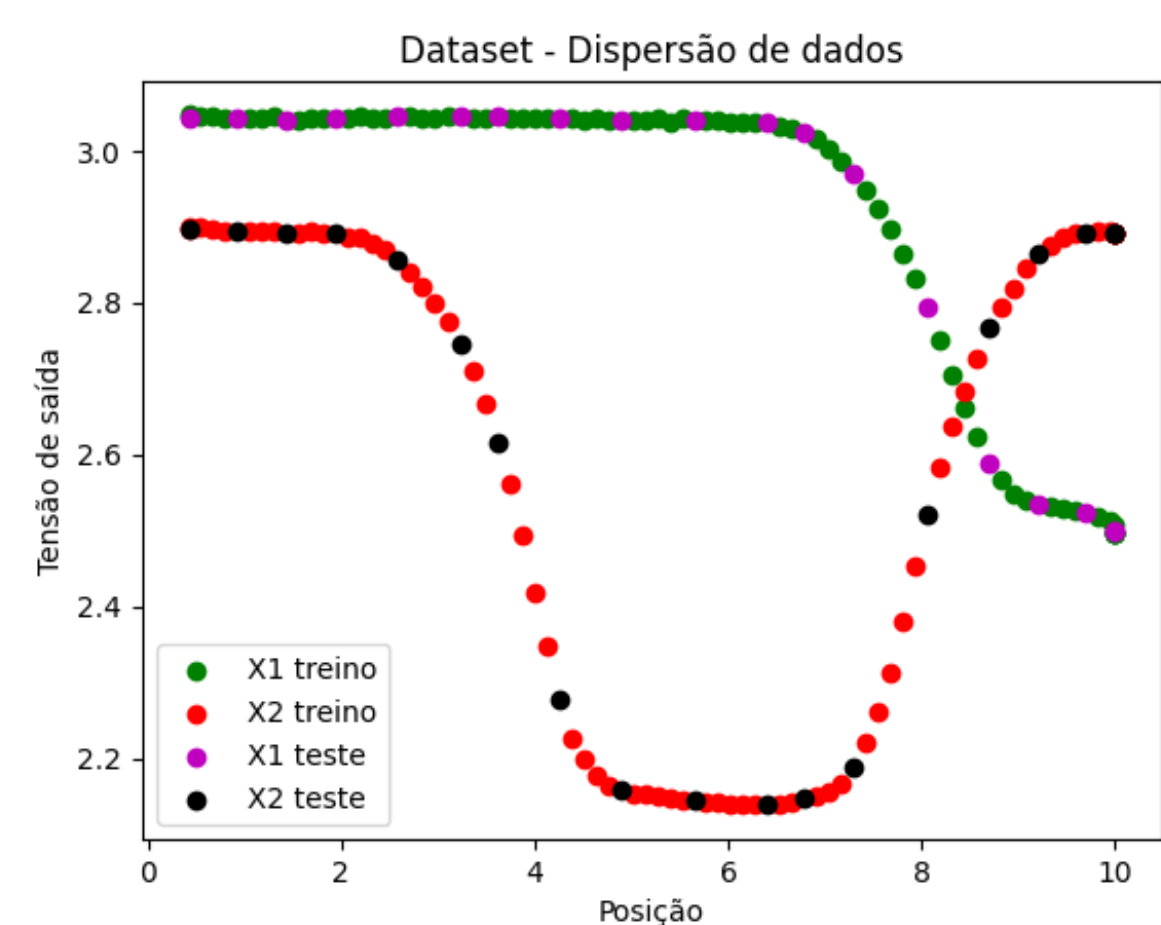
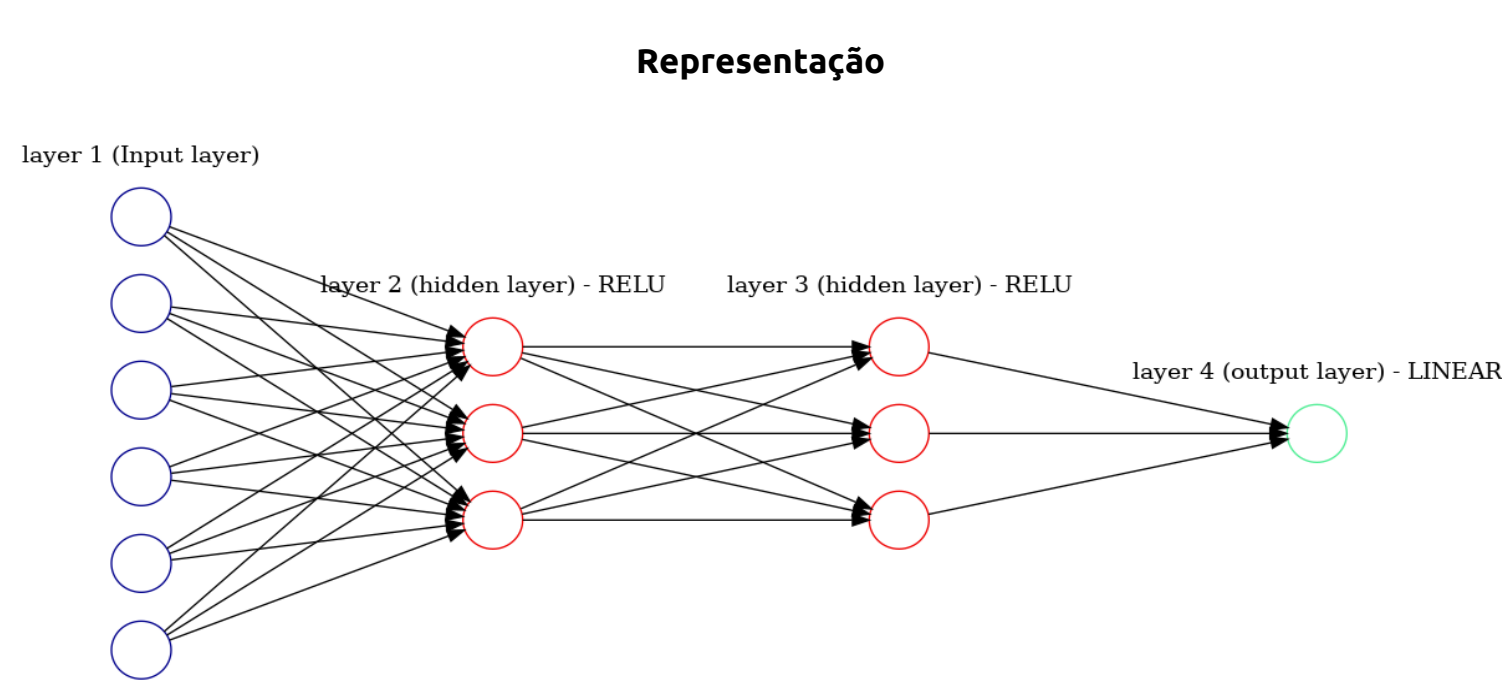
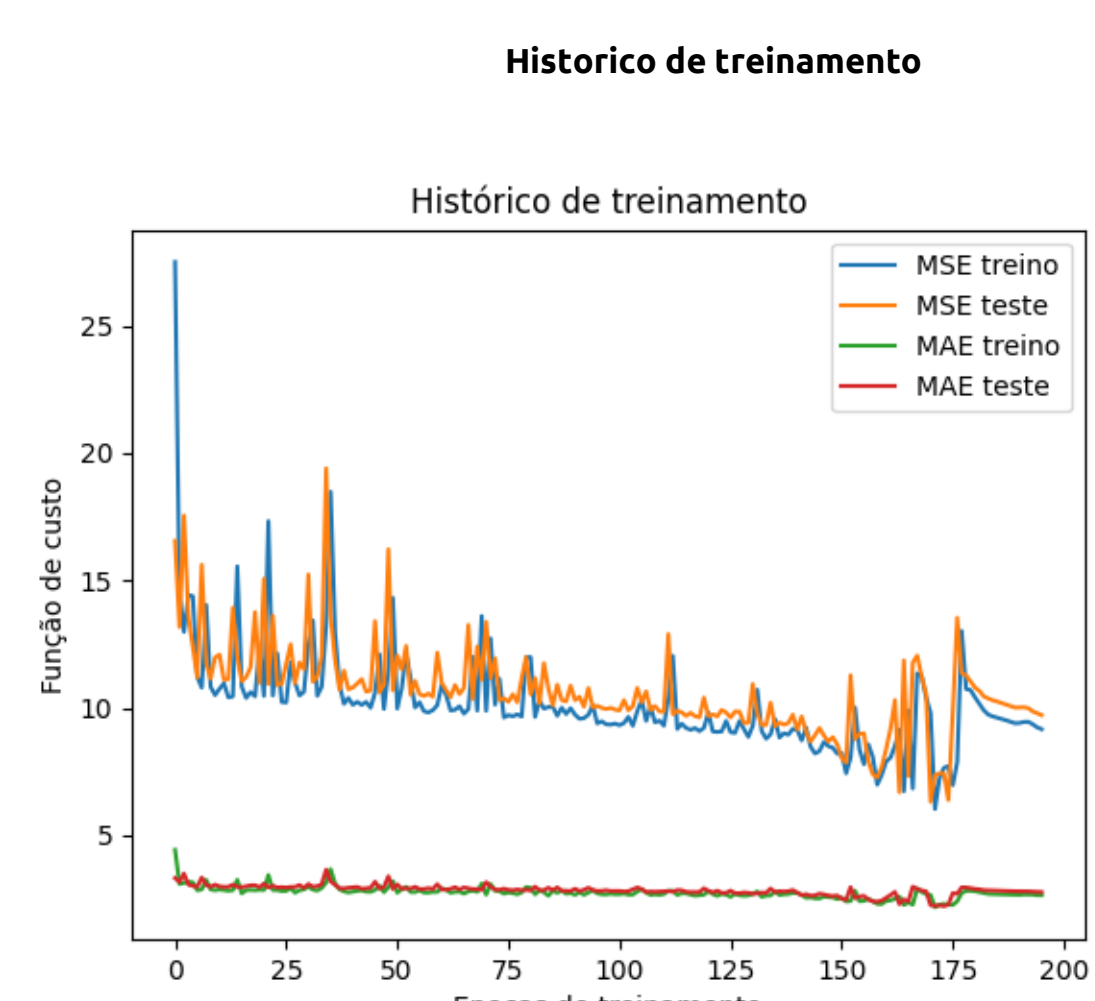


Desempenho esperado: MSE <= 10.0

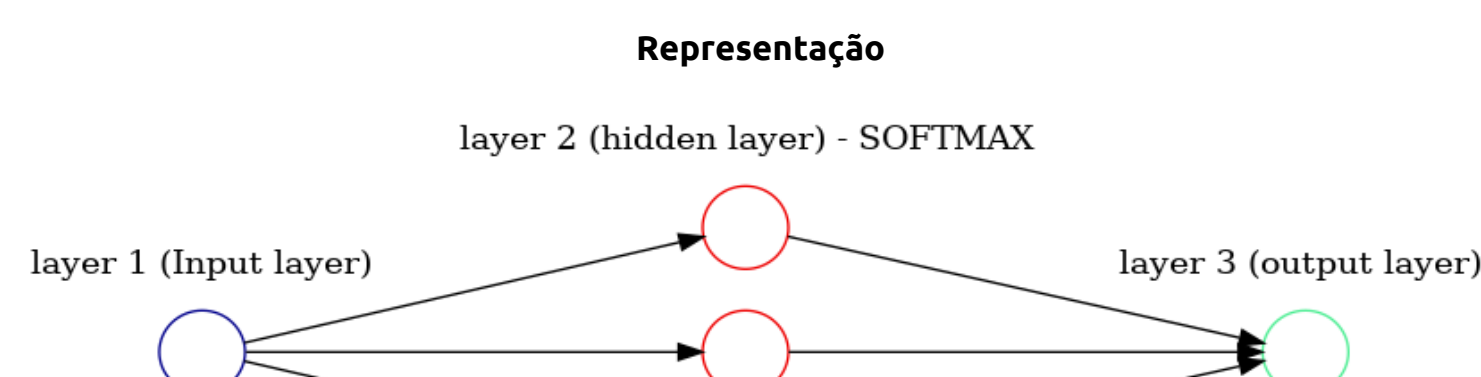
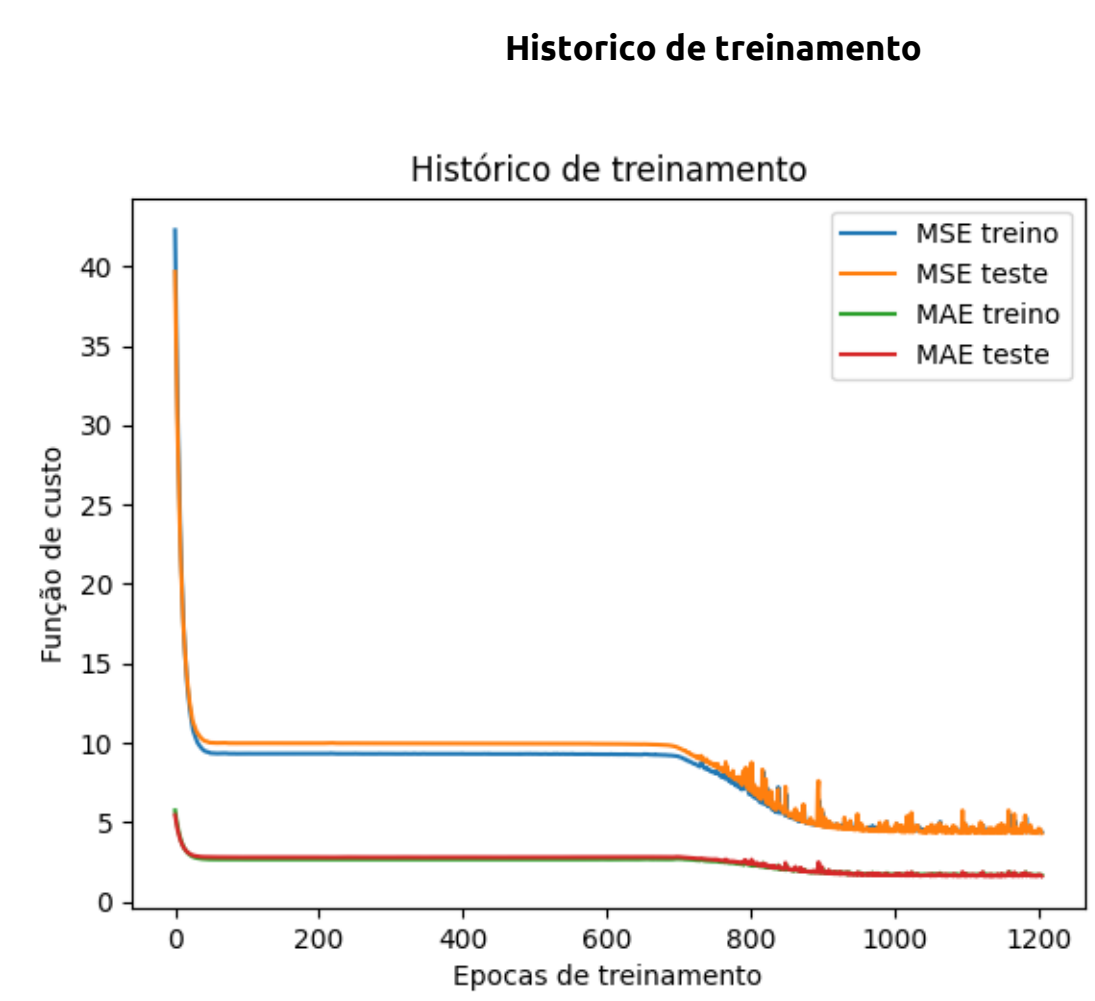


Treinamento com dados não aleatórios

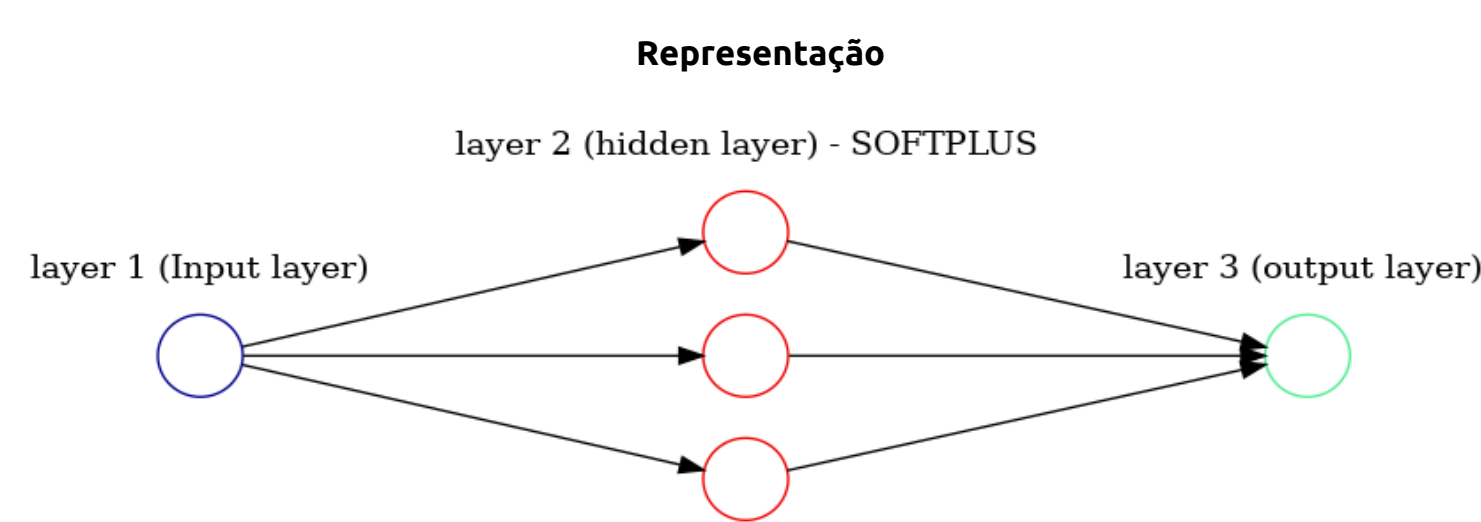
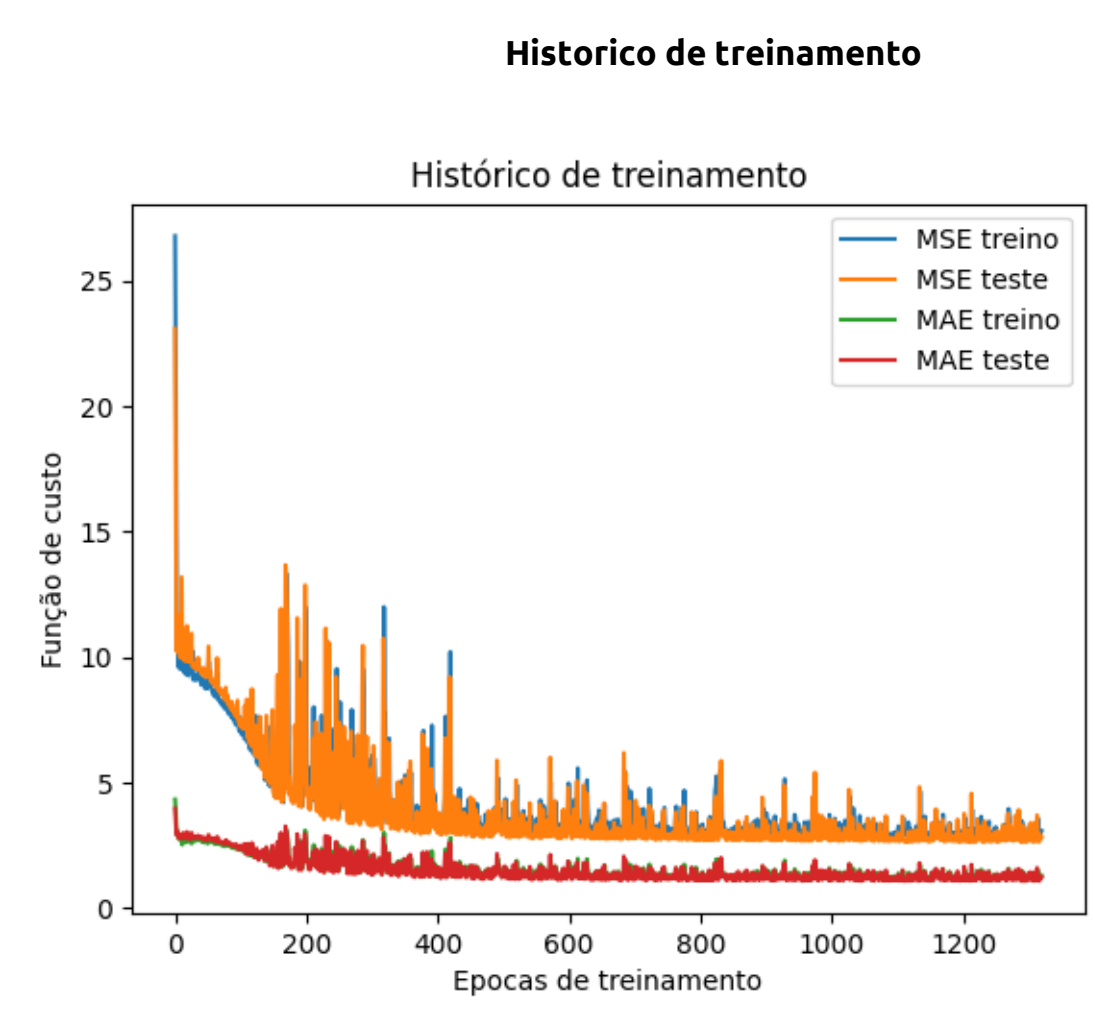
Dados aleatórios	ID RNA	MSE	Accuracy
N	1	9,7537	272,99



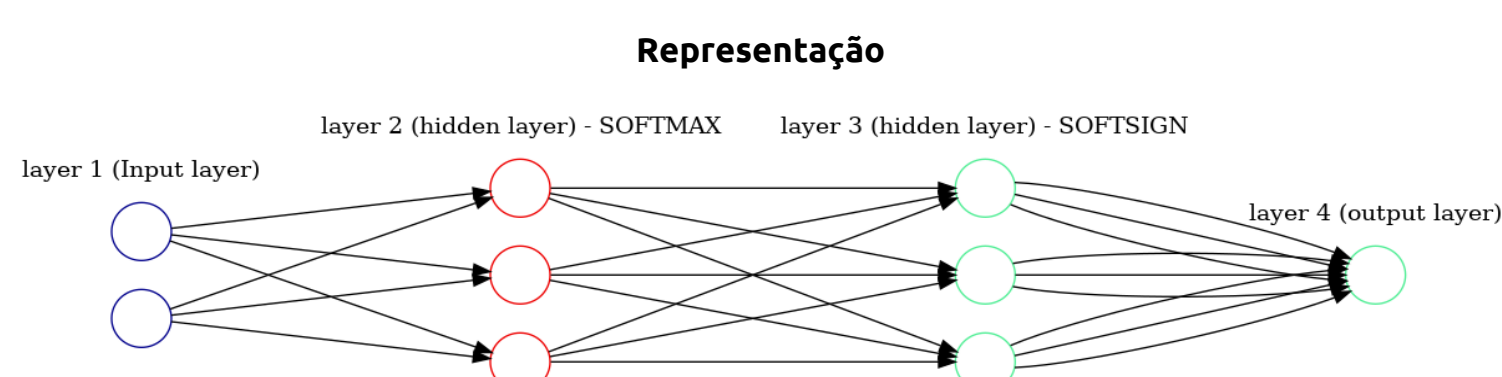
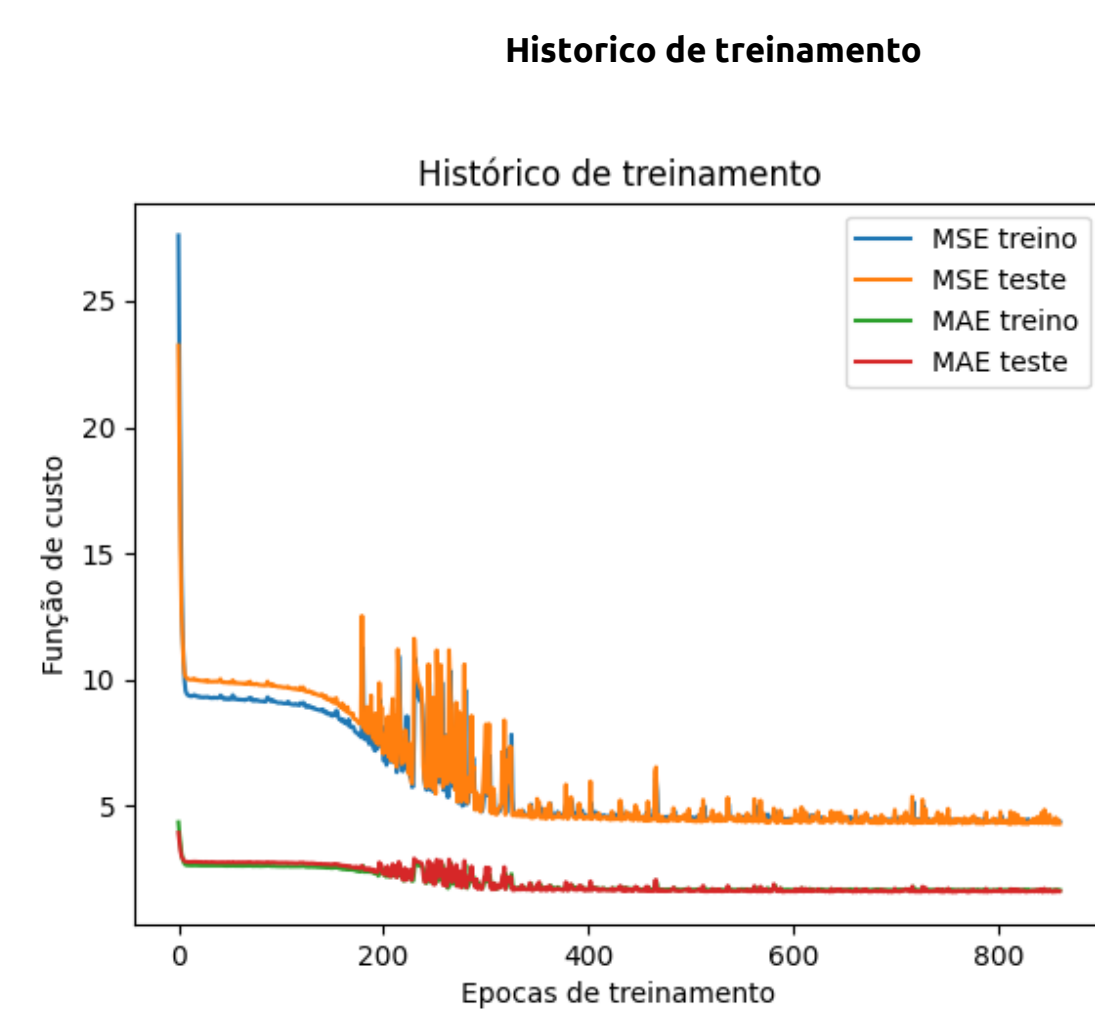
Dados aleatórios	ID RNA	MSE	Accuracy
N	2	5,1985	190,74



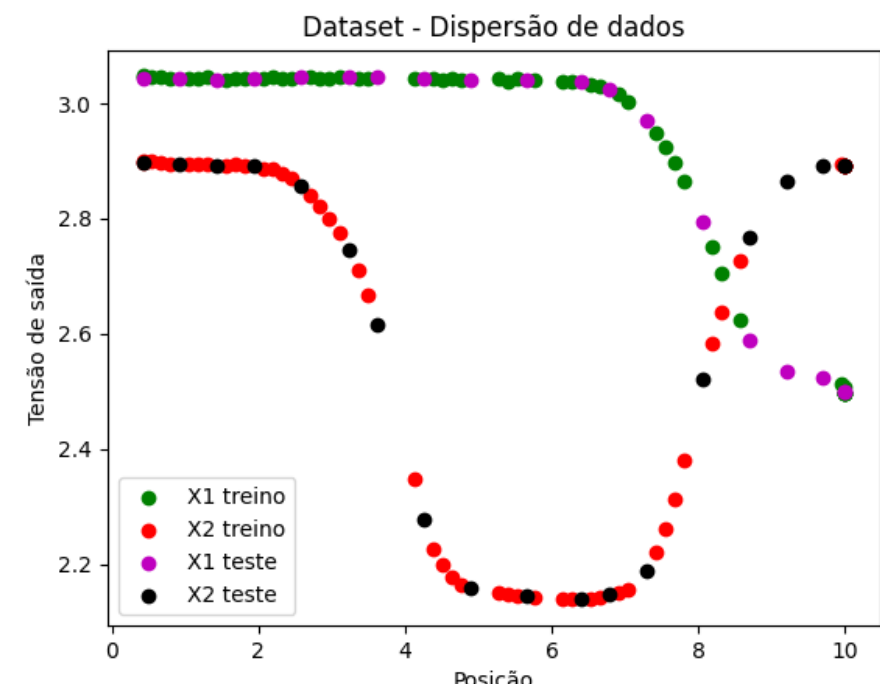
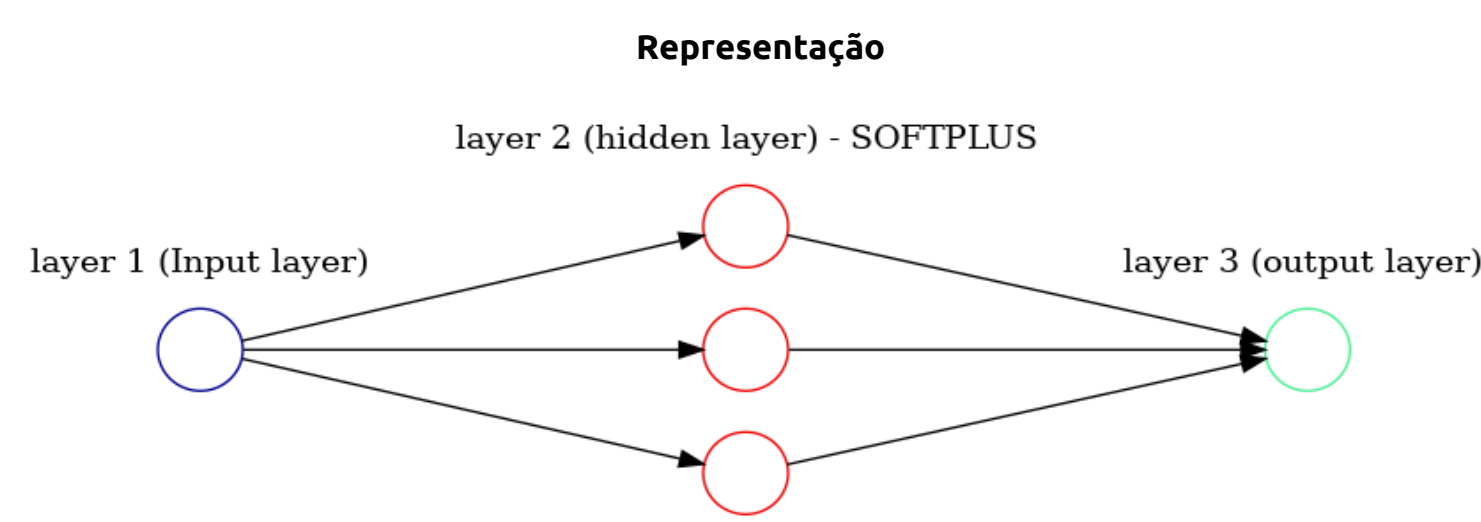
Dados aleatórios	ID RNA	MSE	Accuracy
N	3	3,1686	137,63



Dados aleatórios	ID RNA	MSE	Accuracy
N	4	5,1652	193,61

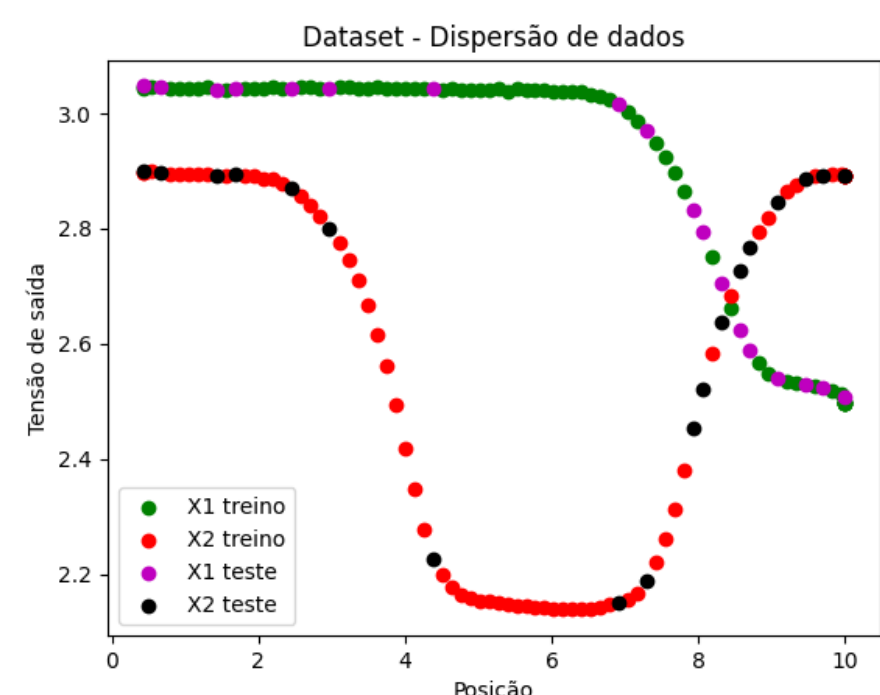
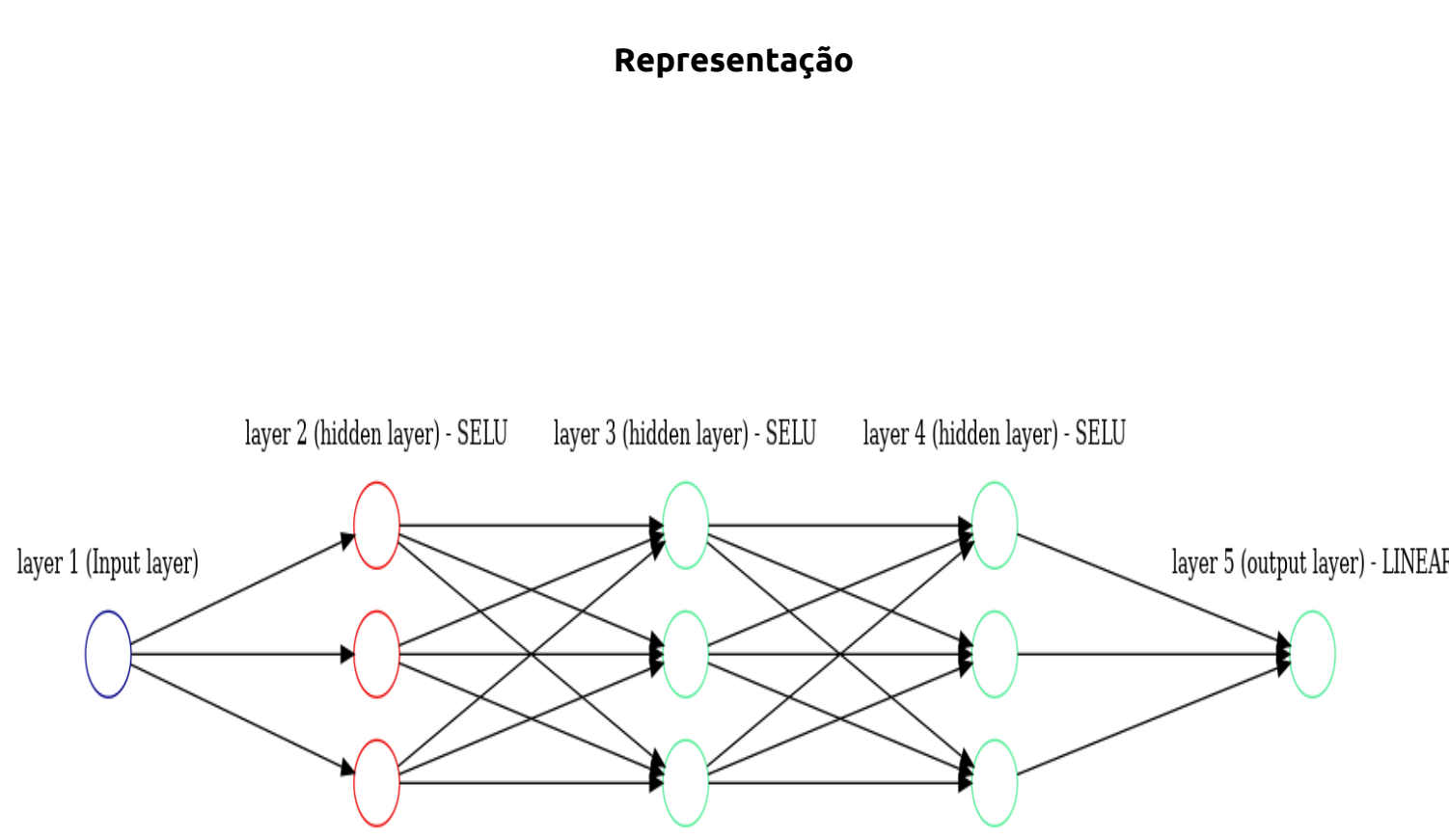
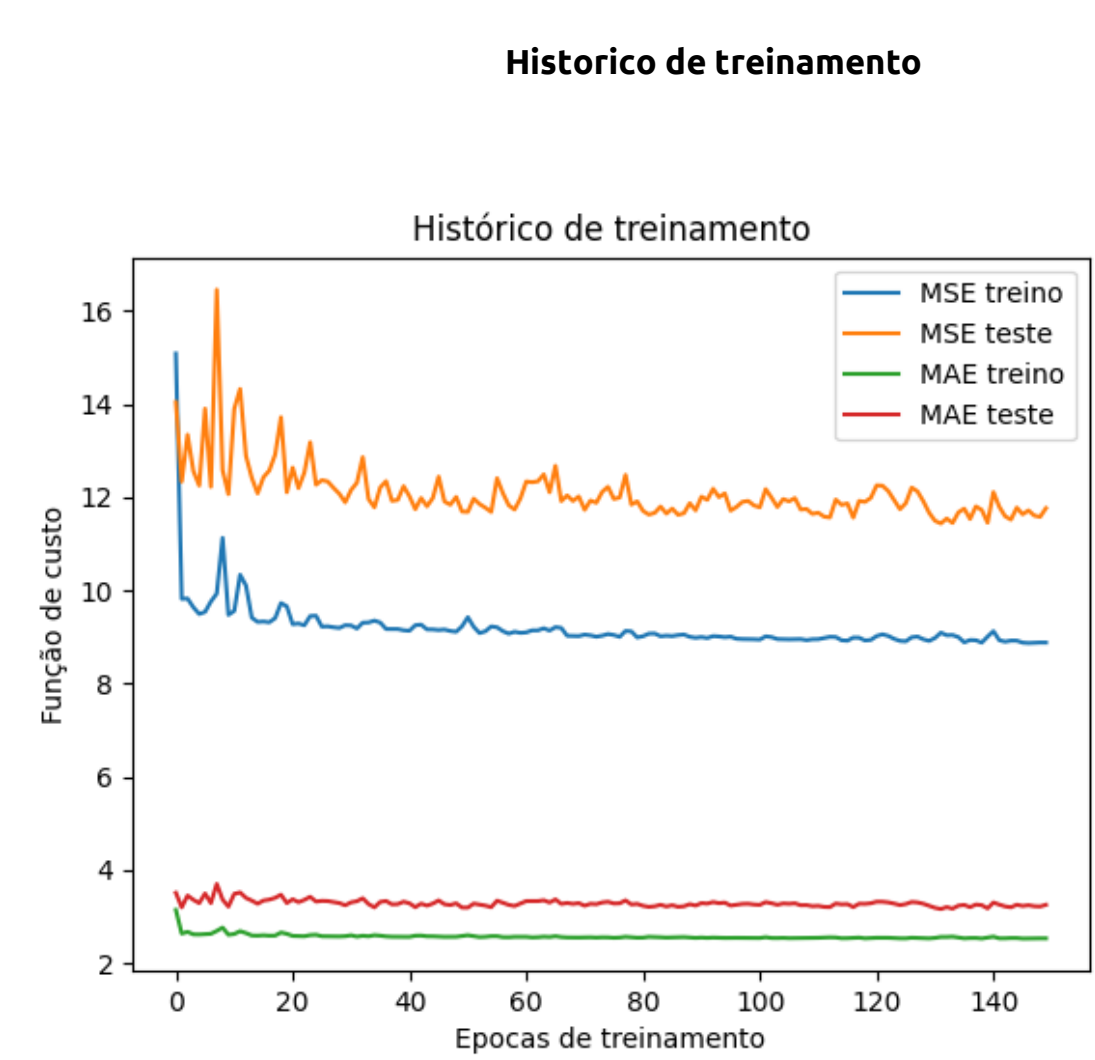


Dados aleatórios	ID RNA	MSE	Accuracy
N	5	9,5886	269,57

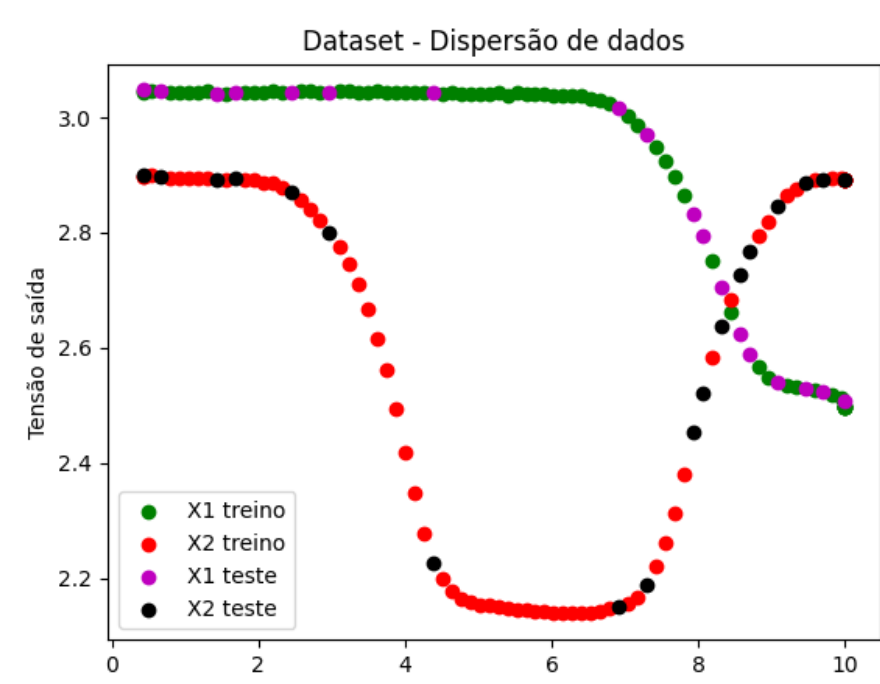
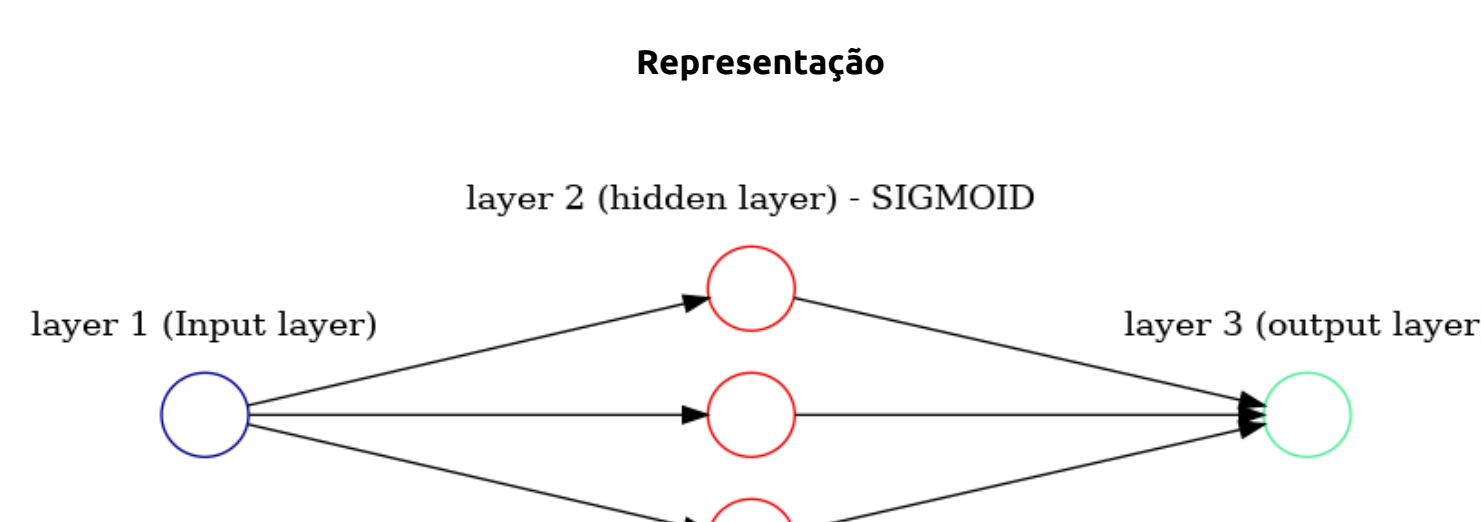
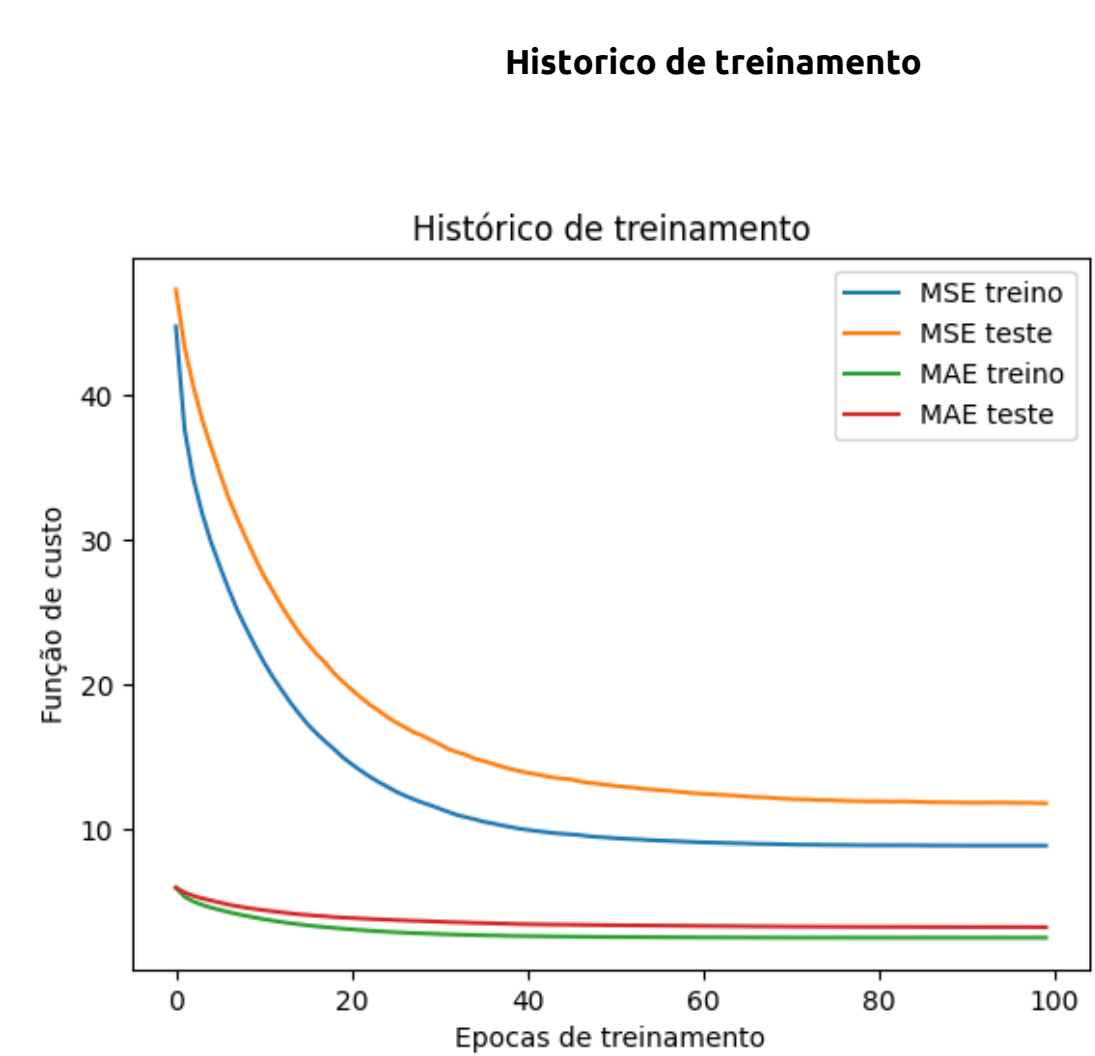


Treinamento com dados aleatórios

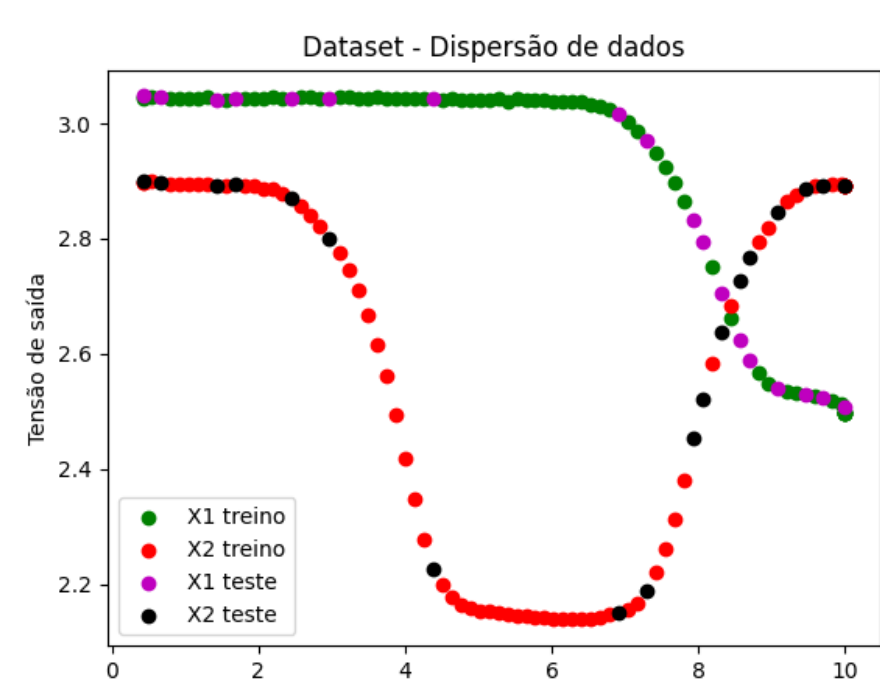
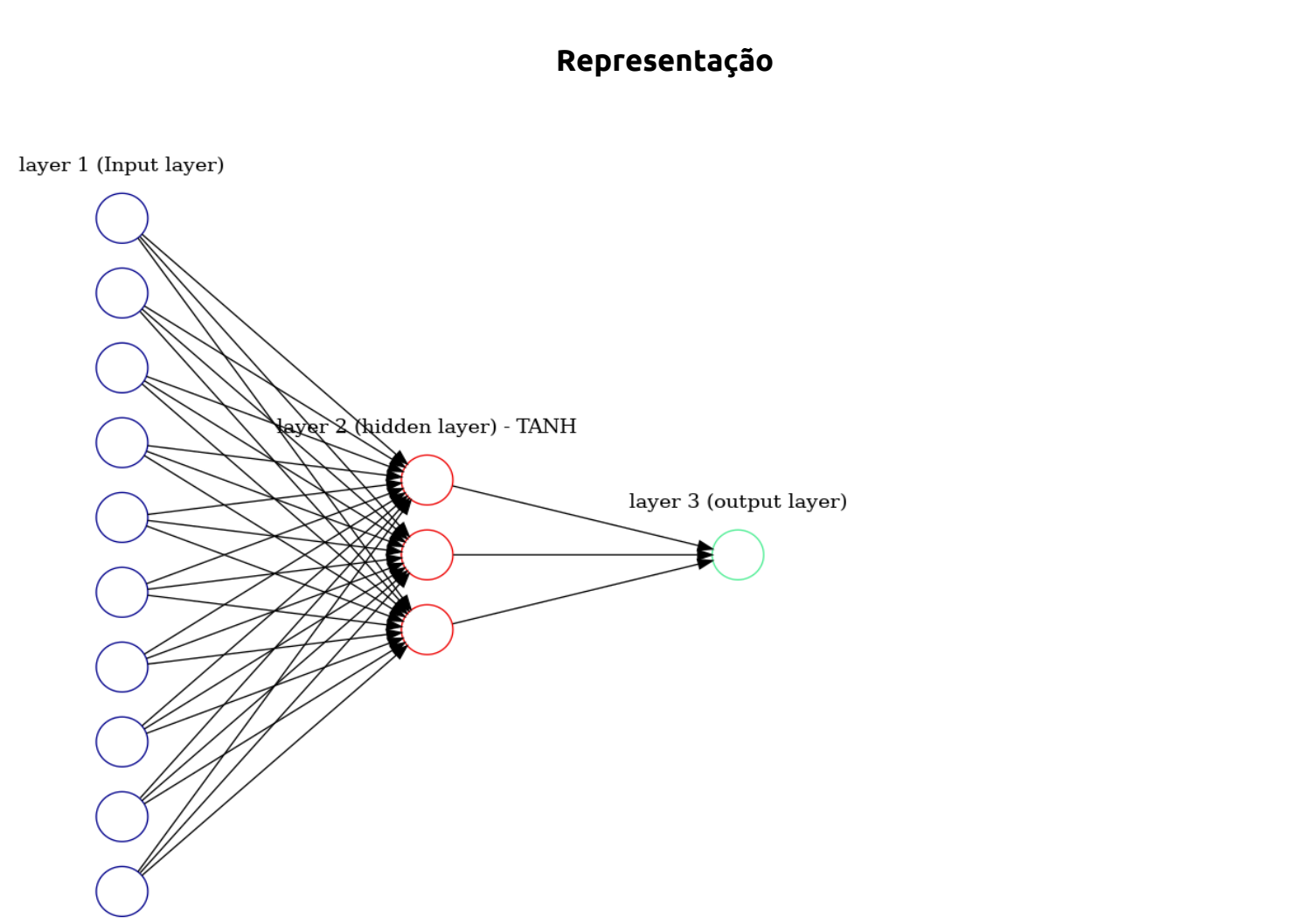
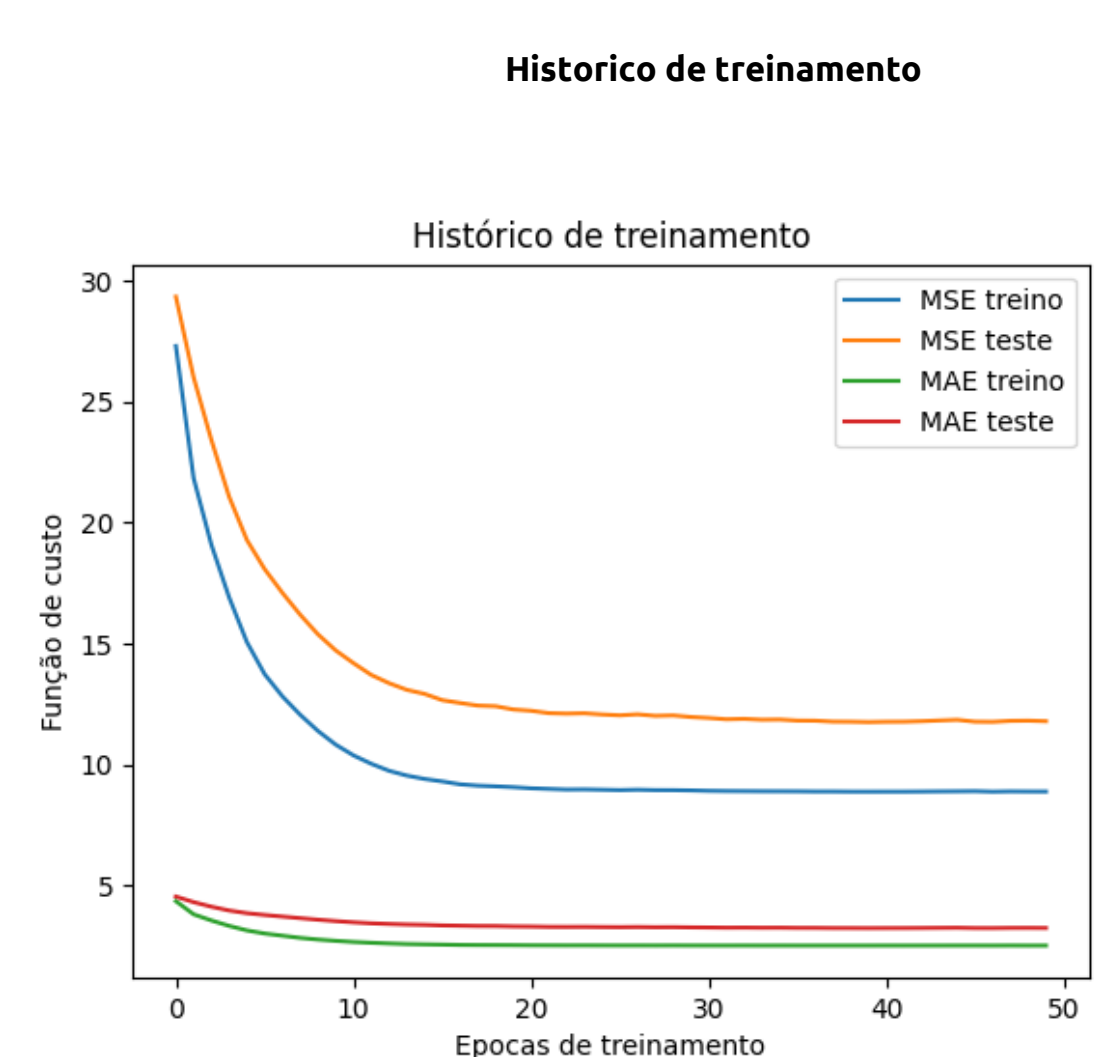
Dados aleatórios	ID RNA	MSE	Accuracy
S	6	8,8627	252,96



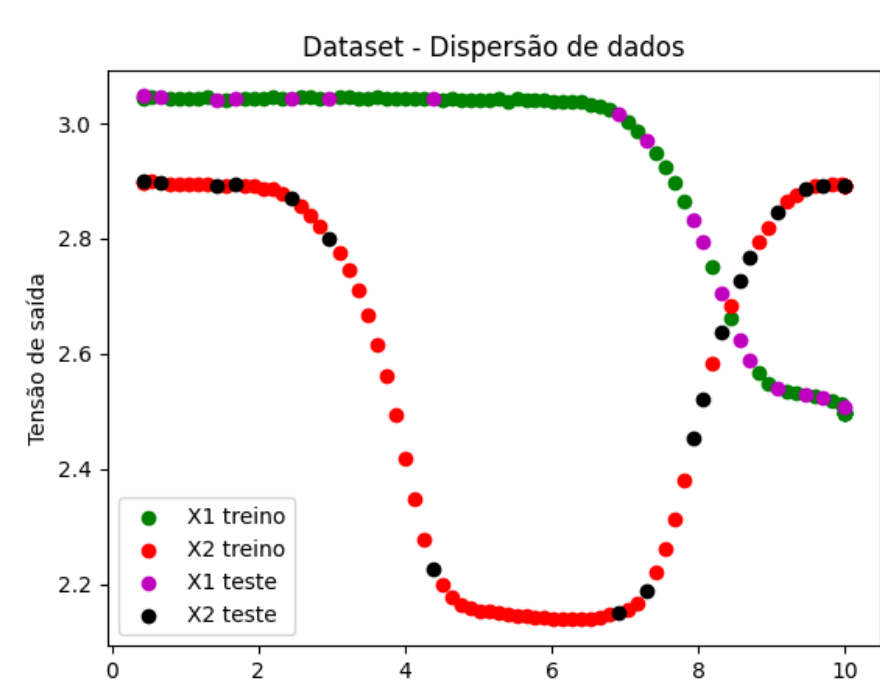
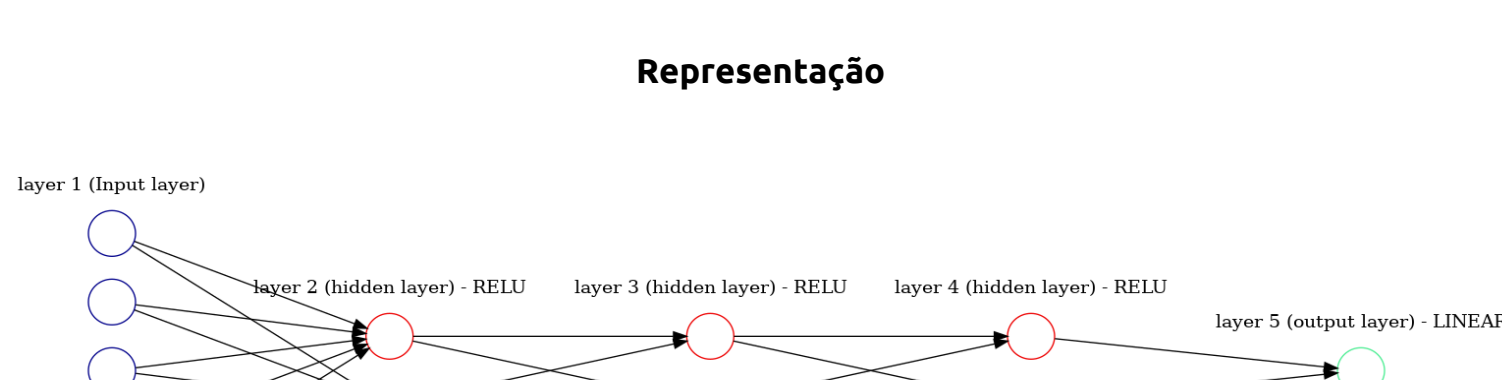
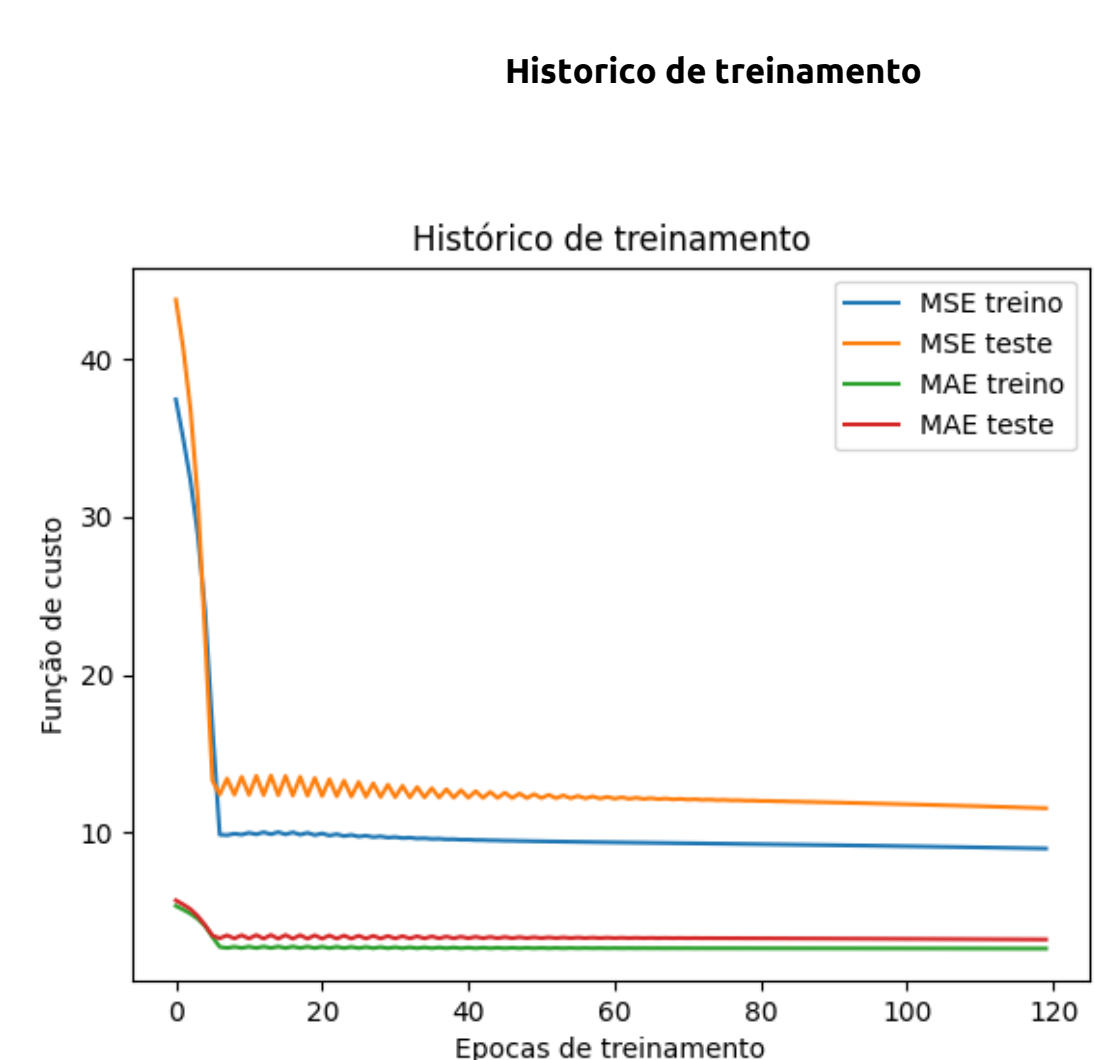
Dados aleatórios	ID RNA	MSE	Accuracy
S	7	8,8954	253,44



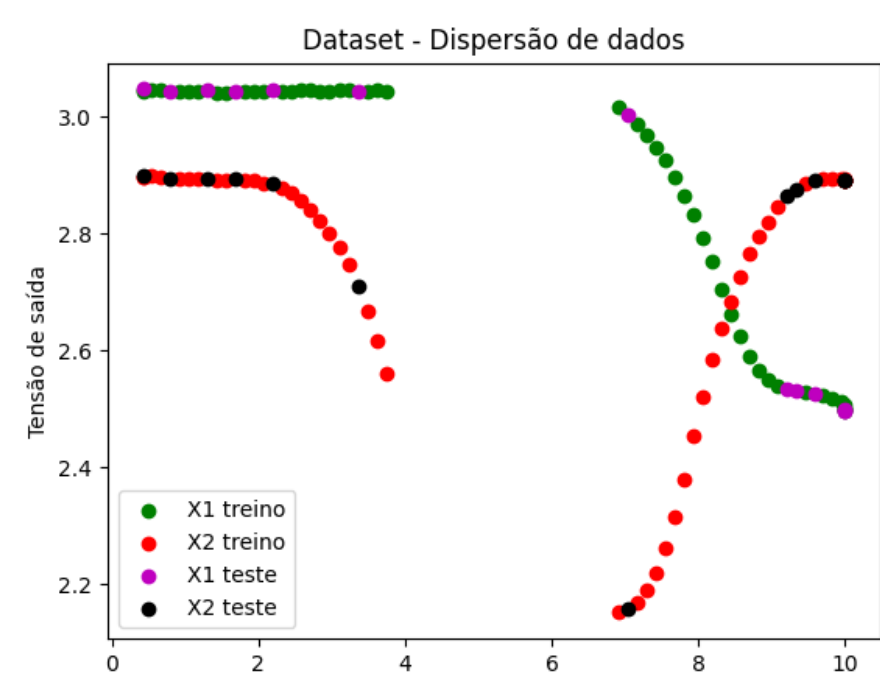
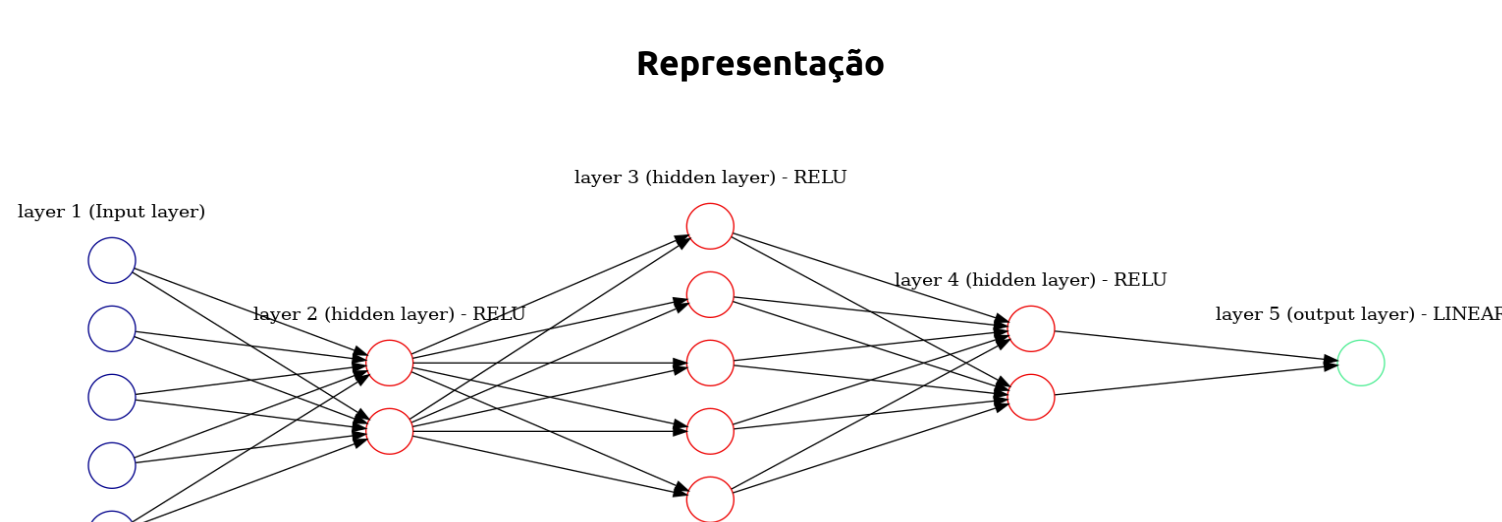
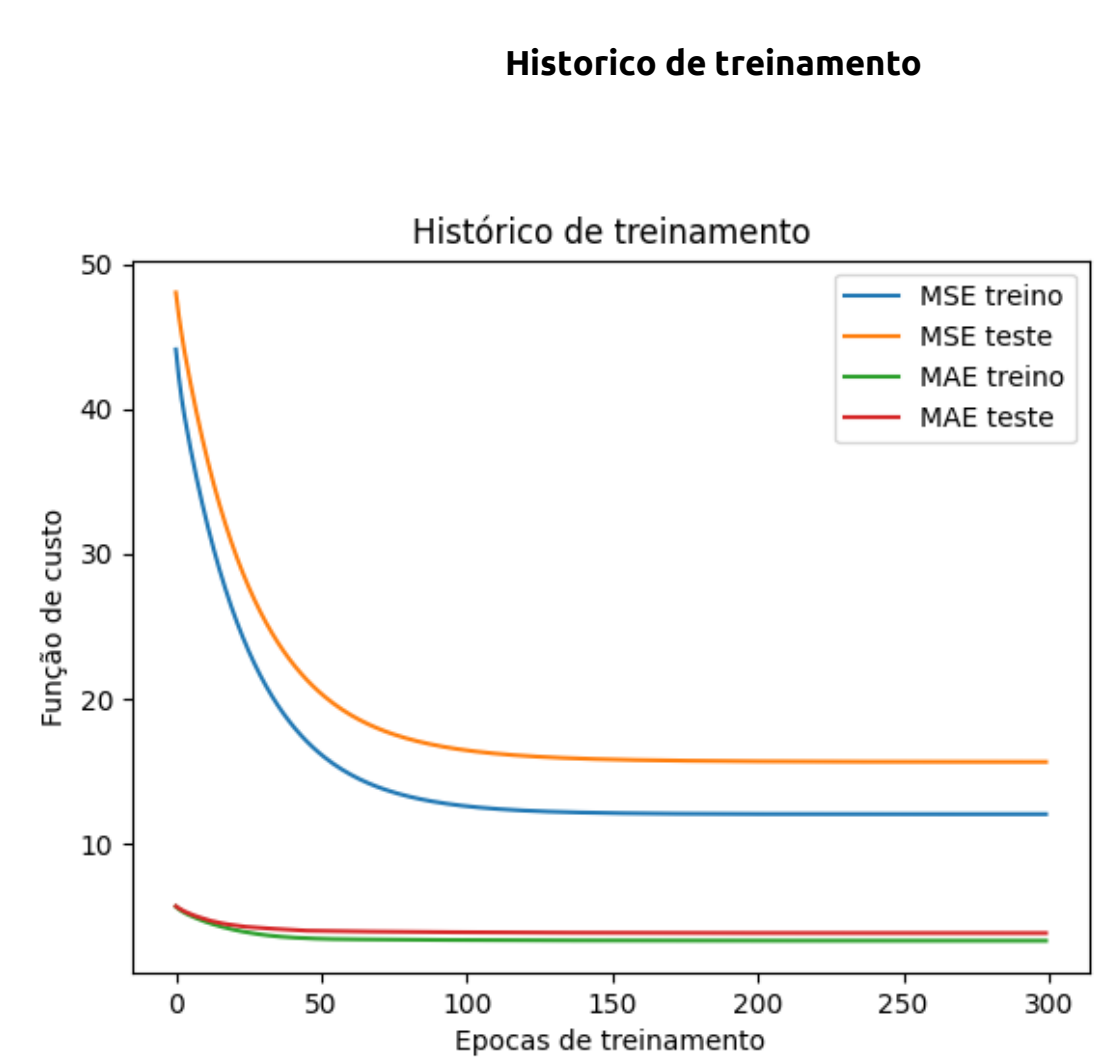
Dados aleatórios	ID RNA	MSE	Accuracy
S	8	8,8952	253,48



Dados aleatórios	ID RNA	MSE	Accuracy
S	9	8,9724	2,6382



Dados aleatórios	ID RNA	MSE	Accuracy
S	10	12,0471	330,7



epoch	loss	mae	val_loss	val_mae
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	1 14.461787223815918	3.080695867538452	13.170639991760254	3.1593360900878906
	2 12.98363208770752	3.127061367034912	17.549222946166992	3.4914467334747314
	3 14.429640769958496	3.162684440612793	13.5740327835083	3.0577566623687744
	4 14.381453514099121	3.1438207626342773	12.406957626342773	3.0075409412384033
	5 11.211047172546387	2.8348512649536133	11.188468933105469	2.9755144119262695
	6 10.79127025604248	2.8696529865264893	15.617505073547363	3.3345890045166016
	7 14.039994239807129	3.2437148094177246	11.748832702636719	3.040919303894043
	8 10.823939323425293	2.8692476749420166	11.138833045959473	2.9709348678588867
	9 10.501395225524902	2.8392226696014404	11.976384162902832	3.0562164783477783
	10 10.746004104614258	2.868844985961914	12.088847160339355	2.9850411415100098
	11 10.961817741394043	2.8506698852539062	11.104479789733887	2.96744632721094727
	12 10.408903121948242	2.8181116580963135	11.129817962646484	2.96911883354187
	13 10.44941234588623	2.8392269611358643	13.928067207336426	3.056480884552002
	14 15.554779052734375	3.243194103240967	11.987096786499023	2.9729769229888916
	15 10.832748413085938	2.7122933864593506	11.046165466308594	2.9608001708984375
	16 10.38688850402832	2.8419785499572754	11.203601837158203	2.990065813064575
	17 10.616985321044922	2.850052833557129	11.595108985900879	3.028388500213623
	18 10.452001571655273	2.8373982906341553	13.758369445800781	3.032563268234253
	19 12.381416320800781	2.856065034866333	10.981365203857422	2.953705310821533
	20 10.466296195983887	2.845970392227173	15.071526527404785	3.097167730331421
	21 17.334728240966797	3.435534954071045	10.928548812866211	2.9438793659210205
	22 10.481656074523926	2.8442399501800537	13.609156608581543	3.013096570968628
	23 12.1348295211792	2.844717025756836	10.89400577545166	2.9432570934295654
	24 10.229304313659668	2.8059728145599365	10.94345760345459	2.9573333263397217
	25 10.208467483520508	2.8109652996063232	11.72965145111084	2.940432071685791
	26 11.786176681518555	2.913788080215454	12.496389389038086	2.9646003246307373
	27 10.984753608703613	2.740335464477539	10.967315673828125	2.9656524658203125
	28 10.484188079833984	2.8354856967926025	11.781054496765137	3.041156530380249
	29 10.628257751464844	2.871443033218384	11.515138626098633	2.925422191619873
	30 12.455578804016113	2.9738266468048096	15.23511028289795	3.0776145458221436
	31 13.429807662963867	2.8610308170318604	11.021988868713379	2.9753224849700928
	32 10.47020149230957	2.8242924213409424	11.218878746032715	2.995063066482544
	33 10.829183578491211	2.927077531814575	12.020363807678223	3.067164897918701
	34 13.235279083251953	3.142418146133423	19.404983520507812	3.64509654045105
	35 18.48520278930664	3.664442300796509	13.631584167480469	3.186741590499878
	36 12.960627555847168	3.09364652633667	11.885796546936035	3.051135301589966
	37 10.907485961914062	2.87416672706604	10.707054138183594	2.912642240524292
	38 10.156742095947266	2.7942419052124023	11.46035099029541	2.9082870483398438
	39 10.387837409973145	2.750603199005127	10.729711532592773	2.9329142570495605
	40 10.119027137756348	2.785489320755005	10.793975830078125	2.9456043243408203
	41 10.23200798034668	2.8119120597839355	10.951491355895996	2.966142416000366
	42 10.114080429077148	2.8306210041046143	11.126385688781738	2.8935546875
	43 10.23115062713623	2.7833011150360107	10.634074211120605	2.9110748767852783
	44 10.00035572052002	2.7763476371765137	10.686524391174316	2.9302515983581543
	45 10.591565132141113	2.849334478378296	13.405728304148926	3.1701221466064453
	46 12.100468635559082	3.0090672969818115	10.604369163513184	2.9010448455810547
	47 9.953949928283691	2.758378505706787	10.916292190551758	2.9631946086883545
	48 11.514718055725098	2.9590823650360107	16.23012351989746	3.3853631019592285
	49 14.321486473083496	3.1938202381134033	10.685891151428223	2.888617992401123
	50 9.970098495483398	2.738962173461914	12.057095527648926	3.065713882446289
	51 10.768529891967773	2.8763034343719482	11.502950668334961	2.8909382820129395
	52 12.132874488830566	2.9689249992370605	12.432373046875	2.915288209915161
	53 11.163736343383789	2.768460988998413	10.514808654785156	2.901395320892334
	54 10.010416030883789	2.765512704849243	11.056783676147461	2.9722936153411865
	55 10.220428466796875	2.8333206176757812	10.538028717041016	2.8814046382904053
	56 9.864629745483398	2.746770143508911	10.46749210357666	2.8844339847564697
	57 9.818717002868652	2.7456490993499756	10.555794715881348	2.9180831909179688
	58 9.904447555541992	2.774111032485962	10.437420845031738	2.88529372215271
	59 10.102500915527344	2.7716877460479736	12.163532257080078	3.075136184692383
	60 10.901618957519531	2.9146792888641357	10.982114791870117	2.8606204986572266
	61 10.49234390258789	2.8525497913360596	10.690546035766602	2.8650567531585693
	62 9.89555549621582	2.737233687634277	10.420313835140403	2.8915047654568848
	63 9.921751976013184	2.7734909057617188	10.893320083618164	2.9569339752197266
	64 10.061248779296875	2.7854981422424316	10.539533615112305	2.864804267883301
	65 9.767834663391113	2.7042856216430664	10.780137062072754	2.9463298320770264
	66 9.95167350769043	2.791653633117676	13.255675315856934	2.9127891063690186
	67 11.996891021728516	2.8187992572784424	10.350179672241211	2.879842758178711
	68 9.889322280883789	2.774388313293457	12.41067886352539	2.886681318283081
	69 13.605647087097168	3.0969934463500977	11.104194641113281	2.847707748413086
	70 9.881348609924316	2.6623661518096924	13.375995635986328	3.155771017074585
	71 12.727966309539375	3.0810821056365967	11.165306091308594	2.9755561351776123
	72 10.125792503356934	2.8171660900115967	11.94430160522461	2.866852045059204
	73 11.140922546386719	2.803626298904419	10.29845905303955	2.850111722946167
	74 9.622286796569824	2.704723358154297	10.376911163330078	2.8990447521209717
	75 9.711912155151367	2.7498843669891357	10.23157024383545	2.851077079772949
	76 9.668560981750488	2.724936008453369	10.531400680541992	2.8361616134643555
	77 9.740030288696289	2.679802179336548	10.216676712036133	2.866427183151245
	78 9.65865707397461	2.7524185180664062	11.167598724365234	2.8345541954040527
	79 11.97659969329834	2.959622621536255	11.987626075744629	2.8536417484283447
	80 11.992610931396484	2.931683301925659	10.525479316711426	2.82619047164917
	81 9.640496253967285	2.6767289638519287	11.172645568847656	2.977325916290283
	82 10.280567169189453	2.8359785079956055	10.162620544433594	2.835568428039551
	83 9.968915939331055	2.75892972946167	11.753164291381836	2.8400135040283203
	84 10.030248641967773	2.6204729080200195	10.765764236450195	2.9363651275634766
	85 10.042348861694336	2.814802885055542	10.087414741516113	2.839818000793457
	86 9.68860912322998	2.7368195056915283	10.908075332641602	2.948086738586426
	87 10.0054292678833	2.8208649158477783	10.304388999938965	2.8172247409820557
	88 9.75666332244873	2.700426677963257	10.250833511352539	2.8161208629608154
	89 9.98458480834961	2.7279653549194336	10.87202262878418	2.8035147190093994
	90 9.729872703552246	2.6562507152557373	10.299750328063965	2.892686605453491
	91 9.568126678466797	2.7563748359680176	10.434389114379883	2.803750991821289
	92 9.594301223754883	2.659788131713867	10.043415069580078	2.8520476818084717
	93 9.725505828857422	2.7465806007385254	10.776840209960938	2.9366562366485596
	94 10.098222732543945	2.828695297241211	10.008657455444336	2.846503973007202
	95 9.46846411895752	2.71416974067688	10.079909324645996	2.807831287384033
	96 9.389688169555664	2.679152727127075	9.999040603637695	2.810056209564209
	97 9.354082107543945	2.6738080978393555	9.950540542602539	2.8351845741271973
	98 9.340771675109863	2.7027342319488525	9.998863220214844	2.804666519165039
	99 9.379611015319824	2.682039976119995	9.929030418395996	2.8066060543060303
	100 9.3170166015625	2.683586359024048	9.896322250366211	2.8065907955169678
	101 9.398592948913574	2.7082207202911377	10.300941467285156	2.7856156826019287
	102 9.64364242553711	2.665501594543457	9.904386520385742	2.798219680786133
	103 9.295042991638184	2.665393590927124	10.061539649963379	2.8673312664031982
	104 9.863470077514648	2.788093328475952	10.779620170593262	2.9440741539001465
	105 10.31409740447998	2.8724443912506104	10.209362030029297	2.8837757110595703
	106 9.484993934631348	2.744344472885132	10.64746379852295	2.766507148742676
	107 10.035052299499512	2.6539456844329834	9.904500961303711	2.783566474914551
	108 9.429314613342285	2.6772806644439697	10.070450782775879	2.774277925491333
	109 9.495668411254883	2.6567039489746094	9.856983184814453	2.7811412811279297
	110 9.299212455749512	2.687390089035034	9.850796699523926	2.7800045013427734
	111 10.363432884216309	2.820589303970337	12.896614074707031	2.801313877105713
	112 12.04129695892334	2.813206434249878	9.749847412109375	2.781222343444824
	113 9.17060375213623	2.653416156768799	9.877626419067383	2.8414127826690674
	114 9.374615669250488	2.717101573944092	9.821537971496582	2.8328351974487305
	115 9.209181785583496	2.713374137878418	9.681231498718262	2.7752978801727295
	116 9.135467529296875	2.6650586128234863	9.802032470703125	2.762078046798706
	117 9.204283714294434	2.625509262084961	9.672045707702637	2.7650492191314697
	118 9.08556079864502	2.6447579860687256	9.627640724182129	2.7652366161346436
	119 9.211695671081543	2.6624481678009033	10.400883674621582	2.9098894596099854
	120 9.815217971801758	2.8004183769226074	9.673974990844727	2.817147970199585
	121 9.072611808776855	2.68681263923645	9.73732852935791	2.74

[illegible]

[illegible]

[illegible]

[illegible]

epoch

loss	mae	val_loss	val_mae
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1 9.82247543334961	2.6380467414855957	12.338631629943848	3.201629877090454
2 9.828747749328613	2.6747689247131348	13.344903945922852	3.4546685218811035
3 9.640084266662598	2.621225357055664	12.565160751342773	3.3629209995269775
4 9.497699737548828	2.6186392307281494	12.252877235412598	3.2919352054595947
5 9.54622566223145	2.6272144317626953	13.904853820800781	3.4983530044555664
6 9.76503849029541	2.633301019668879	12.2279691696167	3.2926459312438965
7 9.936196327209473	2.695009231567383	16.4583168029378516	3.704331398010254
8 11.131028175354004	2.7667510509490967	12.585907936096191	3.368394374847412
9 9.47934341430664	2.611926317214966	12.069289207458496	3.2164506912231445
10 9.563587188720703	2.6292428970336914	13.90127944946289	3.4920287132263184
11 10.339033126831055	2.6900038719177246	14.328615188598633	3.5205092430114746
12 10.109240531921387	2.648968458175659	12.89425277709961	3.404258966445923
13 14.49018745422363	2.59792184829712	12.420097351074219	3.345611572265625
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20 2.279115676879883	2.588794469833374	12.639702796936035	3.37440824508667
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22 2.255359649658203	2.580972433090021	12.533160209655762	3.3614585399627686
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25 9.226683616638184	2.5812060832977295	12.36983871459961	3.340036153793335
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92 9.022669792175293	2.552103281021118	12.185219764709473	3.3149330615997314
93 9.014678001403809	2.5478601455688477	12.005451202392578	3.2905282974243164
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96 8.966107368469238	2.5468318462371828	11.795696258544922	3.256027936935425
97 8.959131240844727	2.54515090952545166	11.90281867980957	3.274869411980084
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101 9.017448378967285	2.5430476669213867	12.177319526672363	3.313652753829956
102 9.00145435333252	2.5430841444592285	11.994149208068848	3.2890515327453613
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105 8.953008651733398	2.5397918224334717	11.915390968322754	3.277285575866699
106 8.957005500793457	2.5406816005706787	11.985335621643066	3.2878639698028564
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115 8.924554824829102	2.539605140686035	11.869585037231445	3.270498037338257
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120 9.02377700805664	2.54817795753479	12.258005142211914	3.322427272796631
121 9.060776710510254	2.5493550300598145	12.250618934631348	3.321518898010254
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123 8.96367073059082	2.5412697792053223	11.939773559570312	3.2814574241638184
124 8.919989585876465	2.53598690032959	11.746639251708984	3.250084161758423
125 8.911713600158691	2.535367965698242	11.87736701965332	3.272144317626953
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	83.8.925644874572754	2.5369160175323486	11.961589813232422	3.28470516204834
	84.8.923149108886719	2.536231279373169	11.935975074768066	3.2810308933258057
	85.8.916922569274902	2.535658121109009	11.91353988647461	3.2777464389801025
	86.8.911482810974121	2.5351696014404297	11.896737098693848	3.2752439975738525
	87.8.90900993347168	2.5350124835968018	11.896062850952148	3.2751426696777344
	88.8.908585548400879	2.534982204437256	11.89404296875	3.274838924407959
	89.8.9073675454858398	2.5348122119903564	11.880680084228516	3.2728164196014404
	90.8.904767990112305	2.5344367027282715	11.86879825592041	3.270996332168579
	91.8.902693748474121	2.5344929695129395	11.862491607666016	3.2700216770171212
	92.8.904317855834961	2.5351006984710693	11.869335174560547	3.271078586578369
	93.8.905224800109863	2.5348522663116455	11.875041007995605	3.2719545364379883
	94.8.904370307922363	2.534543991088867	11.873059272766113	3.271651029586792
	95.8.903596878051758	2.5342888832092285	11.868302345275879	3.2709193229675293
	96.8.902935981750488	2.5344207286834717	11.852303504943848	3.2684342861175537
	97.8.904556274414062	2.5355350971221924	11.864434242248535	3.270321846008301
	98.8.904034614562988	2.5346195697784424	11.841085433959961	3.2666687965393066
	99.8.899120330810547	2.5345401763916016	11.823210716247559	3.263813018798828

epoch	loss	mae	val_loss	val_mae
	0 27.30332374572754	4.370952606201172	29.340776443481445	4.559009075164795
	1 21.840835571289062	3.8250746726989746	26.00517463684082	4.328719139099121
	2 19.091506958007812	3.571714401245117	23.420162200927734	4.140658378601074
	3 16.918275833129883	3.347675085067749	21.075395584106445	3.9822943210601807
	4 15.070656776428223	3.1606223583221436	19.28940773010254	3.8724865913391113
	5 13.745095252990723	3.032552719116211	18.084978103637695	3.7981419563293457
	6 12.82876205444336	2.9417383670806895	17.104991912841797	3.732588529586792
	7 12.070009231567383	2.852139711380005	16.20380401611328	3.6671741008758545
	8 11.401873588562012	2.7837231159210205	15.394232749938965	3.6030120849609375
	9 10.835888862609863	2.7302541732788086	14.728727340698242	3.5452680587768555
	10 10.391944885253906	2.6836650371551514	12.502751159667969	3.495454788208008
	11 10.046460151672363	2.650075674057007	13.717082977294922	3.453354835510254
	12 9.755424499511719	2.6220650672912598	13.375904083251953	3.4276931285858154
	13 9.557744026184082	2.5976099967956543	13.099957466125488	3.4053022861480713
	14 9.417937278747559	2.5847184658050537	12.93283748626709	3.390868663787842
	15 9.315698623657227	2.5740160942077637	12.673335075378418	3.366860866546631
	16 9.19692325592041	2.5607659816741943	12.55729866027832	3.355358600616455
	17 9.14122200012207	2.5562214851379395	12.448806762695312	3.3440916538238525
	18 9.113112449645996	2.5541863441467285	12.422815322875977	3.341304302215576
	19 9.078609466552734	2.5510833263397217	12.2882719039917	3.3263425827026367
	20 9.032190322875977	2.5458881855010986	12.235462188720703	3.3201744556427
	21 9.006577491760254	2.5442333221435547	12.13664722442627	3.308122158050537
	22 8.981650352478027	2.5419092178344727	12.117656707763672	3.3057172298431396
	23 8.986245155334473	2.5426599979400635	12.13155746459961	3.3074731826782227
	24 8.973097801208496	2.5408036708831787	12.080854415893555	3.3009719848632812
	25 8.958698272705078	2.539684772491455	12.04658031463623	3.296447515487671
	26 8.973123550415039	2.5395994186401367	12.087103843688965	3.3017776012420654
	27 8.957669258117676	2.5384998321533203	12.024959564208984	3.2935333251953125
	28 8.955151557922363	2.539907932281494	12.042581558227539	3.295905113220215
	29 8.944847106933594	2.5379974842071533	11.976689338684082	3.286862373352051
	30 8.927799224853516	2.5373096466064453	11.937190055847168	3.2812111377716064
	31 8.919170379638672	2.5362370014190674	11.884153366088867	3.273315906524658
	32 8.915299415588379	2.537073850631714	11.899921417236328	3.275702714920044
	33 8.91081428527832	2.5353236198425293	11.865071296691895	3.2703800201416016
	34 8.908780097961426	2.536100387573242	11.872600555419922	3.271545171737671
	35 8.906639099121094	2.5350170135498047	11.82882308959961	3.2646501064300537
	36 8.89986515045166	2.535003662109375	11.824155807495117	3.2638978958129883
	37 8.899608612060547	2.5350990295410156	11.785919189453125	3.2575809955596924
	38 8.894084930419922	2.534975290298462	11.78173542022705	3.2568747997583936
	39 8.893282890319824	2.5348236560821533	11.766740798950195	3.2543106079101562
	40 8.894285202026367	2.5356435775756836	11.779766082763672	3.2565436363220215
	41 8.894011497497559	2.53493070602417	11.783175468444824	3.2571232318878174
	42 8.898046493530273	2.5354058742523193	11.804210662841797	3.2606422901153564
	43 8.903615951538086	2.5355374813079834	11.833292961120605	3.265373706817627
	44 8.907679557800293	2.5362322330474854	11.859843254089355	3.2695698738098145
	45 8.91312026977539	2.5363097190856934	11.78364372253418	3.2572078704833984
	46 8.893135070800781	2.534719228744507	11.776355743408203	3.2559714317321777
	47 8.904227256774902	2.5370047092437744	11.818035125732422	3.262913703918457
	48 8.89945125579834	2.5344247817993164	11.82546329498291	3.2641184329986572
	49 8.897635459899902	2.5346336364746094	11.80399227142334	3.260613441467285

epoch	loss	mae	val_loss	val_mae
0	37.4507942199707	5.345955848693848	43.772457122802734	5.694247245788574
1	34.99396514892578	5.110105037689209	40.717201232910156	5.437243938446045
2	32.308563232421875	4.8507490158081055	36.809654235839844	5.139065265655518
3	28.889482498168945	4.523090839385986	31.14931297302246	4.697194576263428
4	24.001758575439453	4.0662946701049805	22.38242530822754	4.119375228881836
5	16.632400512695312	3.3819663524627696	13.289305686950684	3.4676549434661865
6	9.859201431274414	2.7408931255340576	12.407635688781738	3.291233539581299
7	7.826763153076172	2.675935745239258	13.416226387023926	3.4796321392059326
8	9.922332763671875	2.7516298294067383	12.395191192626953	3.2801434993743896
9	9.859444618225098	2.6756269931793213	13.522464752197266	3.4888713359832764
10	9.97844635100586	2.760075807571411	12.38467788696289	3.271907329559326
11	9.880430236254883	2.675246000289917	13.588424682617188	3.498046875
12	10.014395713806152	2.765221357345581	12.37294864654541	3.2667150497436523
13	9.886025428771973	2.67435622215271	13.60643196105957	3.5008058547973633
14	10.023908615112305	2.766871690750122	12.358882904052734	3.264150857925415
15	9.877243041992188	2.6730408668518066	13.581990242004395	3.49800968170166
16	10.009284019470215	2.7655625343322754	12.342924118041992	3.263543128967285
17	9.857734680175781	2.671419858932495	13.527177810668945	3.491196632385254
18	9.977459907531738	2.762125253677368	12.326061248779297	3.2642667293548584
19	9.831402778625488	2.669600248336792	13.453897476196289	3.481786012649536
20	9.935596466064453	2.7573235034942627	12.309191703796387	3.2658567429588867
21	9.80128383664746	2.6676602363586426	13.37100601196289	3.472109079360962
22	9.889067649841309	2.7517173290252686	12.29293155670166	3.2680022716522217
23	9.769418716430664	2.666058301925659	13.284262657165527	3.463493824005127
24	9.841338157653809	2.7456741333007812	12.277670860290527	3.270500659942627
25	9.737112998962402	2.6647562980651855	13.197174072265625	3.4545793533325195
26	9.792472694396973	2.739427089691162	12.263628005981445	3.2732205390930176
27	9.705174446105957	2.663465976715088	13.111818313598633	3.445544958114624
28	9.749643325805664	2.7331223487854004	12.250911712646484	3.2760725021362305
29	9.674115180969238	2.66218900680542	13.029399871826172	3.4365062713623047
30	9.707472801208496	2.7268543243408203	12.239559173583984	3.2789909839630127
31	9.64426040649414	2.660923719406128	12.950611114501953	3.427542209625244
32	9.668264389038086	2.72074294090271	12.229548454284668	3.281924247741699
33	9.615815162658691	2.6602747440338135	12.87583065032959	3.4187095165252686
34	9.632118225097656	2.7155613899230957	12.220815658569336	3.284829616546631
35	9.588907241821289	2.6598331928253174	12.805245399475098	3.4100522994995117
36	9.599017143249512	2.7105302810668945	12.21325969696045	3.287665843963623
37	9.563603401184082	2.6593921184539795	12.73891830444336	3.401606798171997
38	9.668857192993164	2.705672264099121	12.206745147705078	3.2903952598571777
39	9.5399332024650879	2.6589457988739014	12.676833152770996	3.393404245376587
40	9.541486740112305	2.7010087966918945	12.201095581054688	3.2929797172546387
41	9.5178804397583	2.65848708152771	12.618912696838379	3.3854737281799316
42	9.516709327697754	2.6965560913085938	12.196111679077148	3.2953829765319824
43	9.497401237487793	2.658739568029785	12.56502914428711	3.3778390884399414
44	9.494300842285156	2.692330837249756	12.1915712189331055	3.297569751739502
45	9.478419303894043	2.6589550971984863	12.515019416809082	3.3705215454101562
46	9.474021911621094	2.688898801803589	12.187236785888672	3.299506664276123
47	9.46082878112793	2.6591105461120605	12.468685150146484	3.363538980484009
48	9.455613136291504	2.6856892108917236	12.182857513427734	3.301163911819458
49	9.444500923156738	2.659196138381958	12.425796508789062	3.3569018840789795
50	9.438822746276855	2.6826817989349365	12.178184509277344	3.302515745162964
51	9.429295539855957	2.659205198287964	12.386098861694336	3.3506171703338623
52	9.423393249511719	2.6798794269561768	12.173001289367676	3.303544044494629
53	9.41505241394043	2.659198522567749	12.349328994750977	3.3446853160856154
54	9.409085273742676	2.677281141281128	12.167096138000488	3.3042333126068115
55	9.401617050170898	2.659576177597046	12.315205574035645	3.339099407196045
56	9.395673751831055	2.6748828887939453	12.160309791564941	3.304579019546509
57	9.388832092285156	2.6598241329193115	12.283443450927734	3.3338470458984375
58	9.382954597473145	2.6726770401000977	12.152510643005371	3.3045811653137207
59	9.37655489135742	2.6599435806274414	12.253761291503906	3.3289098739624023
60	9.370750427246094	2.670653820037842	12.14361572265625	3.3042471408843994
61	9.36465072631836	2.65993595123291	12.225886344909668	3.3242645263671875
62	9.358911514282227	2.6688005924224854	12.133584022521973	3.3035898208618164
63	9.353007316589355	2.6598074436187744	12.19955062866211	3.3198835849761963
64	9.34731388092041	2.667102813720703	12.122407913208008	3.3026278066394043
65	9.341527938842773	2.65956449508667	12.174513816833496	3.3157382011413574
66	9.335856437683105	2.6655452251434326	12.110111236572266	3.301379680633545
67	9.33012866973877	2.6592159271240234	12.150543212890625	3.3117969036102295
68	9.324461936950684	2.664111614227295	12.096744537353516	3.2998695373535156
69	9.318751335144043	2.658770799636841	12.127433776855469	3.308028221130371
70	9.313065528869629	2.662785530090332	12.082371711730957	3.2981209754943848
71	9.307344436645508	2.658238172531128	12.104994773864746	3.304402351379393
72	9.30162239074707	2.6615514755249023	12.067060470581055	3.296156406402588
73	9.295867919921875	2.6576273441314697	12.083063125610352	3.3008899688720703
74	9.290098190307617	2.6603946685791016	12.050887107849121	3.293997049331665
75	9.284294128417969	2.6571412806486816	12.061492919921875	3.297464609146118
76	9.278463173217777	2.659301280975342	12.033926010131836	3.2916641235351562
77	9.27464539252973	2.6566295623779297	12.04015064239502	3.294100761413574
78	9.26669979095459	2.6582589149475098	12.016239166259766	3.2891747951150757
79	9.260763168334961	2.6560537815093994	12.01893138885498	3.2907772064208984
80	9.254790306091309	2.657256841659546	11.997885704040527	3.2865447998046875
81	9.24877515482177734	2.655424118041992	11.997735023498535	3.2874739170074463
82	9.242722511291504	2.656285524368286	11.978917121887207	3.2837860584259033
83	9.236624717712402	2.6547470092773438	11.976482391357422	3.2841742038726807
84	9.230484008789062	2.6553361415863037	11.95937442779541	3.280910015106201
85	9.224299430847168	2.654029130935669	11.955100059509277	3.28086256980896
86	9.218067169189453	2.6544013023376465	11.939289093017578	3.2779252529144287
87	9.211790084838867	2.653275489807129	11.933530807495117	3.27752685546875
88	9.205463409423828	2.653475284576416	11.918684005737305	3.2748372554779053
89	9.199089050292969	2.6524899005889893	11.911722183227539	3.2741551399230957
90	9.192665100097656	2.652553081512451	11.897578239440918	3.271651029586792
91	9.186188697814941	2.65167498588562	11.889629364013672	3.270737648010254
92	9.179661750793457	2.65162992477417	11.875983238220215	3.2683701515197754
93	9.173081398010254	2.650834321975708	11.867216110229492	3.26726727271728516
94	9.166450500488281	2.65077017612457275	11.853900909423828	3.264995574951172
95	9.159761428833008	2.649968385696411	11.844447135925293	3.263735294342041
96	9.153018951416016	2.649765968322754	11.831335067749023	3.2615290272296143
97	9.146218299865723	2.649078130722046	11.821292877197266	3.2601356506347656
98	9.13963288879395	2.648818254470825	11.808282852172852	3.257969856262207
99	9.13244915008545	2.6481640338897705	11.797730445861816	3.256462574005127
100	9.125475883483887	2.647857189178467	11.784740447998047	3.2543179888861084
101	9.11844253540039	2.647226333618164	11.773731231689453	3.2527108192443848
102	9.111349105834961	2.6468799114227295	11.760697364807129	3.2505710124969482
103	9.104194641113281	2.64626407623291	11.749279022216797	3.248875379562378
104	9.096977233886719	2.6458842754364014	11.736149787902832	3.2467281818389893
105	9.089695048480957	2.6452767848968506	11.724349975585938	3.2449514865875244
106	9.082350730895996	2.644867420196533	11.71108627319336	3.242786407470703
107	9.074942588806152	2.644263505935669	11.698927879333496	3.2409353256225586
108	9.067466735839844	2.6438279151916504	11.685492515563965	3.238744020462036
109	9.05992603302002	2.6432223320007324	11.672995567321777	3.236823081970215
110	9.052318572998047	2.642763376235962	11.659364700317383	3.2345986366271973
111	9.04464054107666	2.642152786254883	11.646539688110352	3.2326111793518066
112	9.036897659301758	2.6417930126190186	11.632686614990234	3.230346918106079
113	9.02983298278809	2.641289234161377	11.619543075561523	3.22829532623291
114	9.0211992226379395	2.6409339904785156	11.605449676513672	3.2259867191314697
115	9.013243675231934	2.640423297888208	11.591995239257812	3.2238729000091553
116	9.005217552185059	2.6400489807128906	11.577643394470215	3.22151517868042
117	8.997118949890137	2.639528274536133	11.563883781433105	3.2193405628204346
118	8.98946914672852	2.639136791229248	11.549260139465332	3.2169296741485596
119	8.980703353881836	2.6386024951934814	11.535200119018555	3.2146966457366943

lss	mss	vol_lss	vol_mss
0.44.129737854003906	5.663956642150879	46.05666732788086	5.692273617907715
1.42.23699951171875	5.49317789077588	46.47836685180664	5.551103591189845
2.40.73054125294805	5.35209312777832	46.14754867553711	5.432050281188965
3.32.3038679394541	5.23669717379707	46.94763185395935	5.325441837310791
4.38.36340713500769	5.13098382498291	42.88565399169922	5.46719327545166
5.57.32125854921875	5.03675898988721	41.825889587402344	5.15354061126709
6.52.46965248952851	4.946543753514897	41.258589587402344	5.070152429498942
7.35.35915756252586	4.8645477294921875	39.866024017333984	4.994548320770264
8.34.43599319458008	4.783747673034668	38.94281005895375	4.902032325744102
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