Names: Michael Balcerzak, Kuba Potera

Student Numbers: 101071699, 10115432

Libraries used: most recent versions of pandas, numpy, cvxopt, math, autograd, pyplot.

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1d)
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Table: Different training losses for different models

```
Model | L_2 loss | L_2 loss | L_inf loss

L_2 Model | 0.02195529826247768 | 0.023044304535428106 | 0.02796169729737883

L_1 Model | 0.16699146530459466 | 0.15706138462087946 | 0.20572626053247667

L inf Model | 5.00974395913784 | 4.711841538626384 | 6.1717878159743
```

Table: Different test losses for different models

```
Model | L_2 loss | L_2 loss | L_inf loss

L_2 Model | 0.0197020636144262 | 0.01976465141082499 | 0.02394708648907498

L_1 Model | 0.15908510988891536 | 0.15889173091578115 | 0.17452235311639228

L_inf Model | 159.08510988891535 | 158.89173091578115 | 174.52235311639228
```

Table: Different training losses for different models

```
Model | L_2 loss | L_2 loss | L_inf loss

L_2 Model | 0.008752817096550427 | 0.010677393902190128 | 0.012263669973475017

L_1 Model | 0.10567865679129301 | 0.09725614502158306 | 0.12456209232930808

L_inf Model | 3.1703597037387903 | 2.917684350647492 | 3.7368627698792425
```

```
Model | L_2 loss | L_2 loss | L_inf loss

L_2 Model | 0.02125981235371155 | 0.021385321561594627 | 0.024019361084271395

L_1 Model | 0.16321793303009113 | 0.16269328015306836 | 0.1760734900880556

L_inf Model | 163.21793303009113 | 162.69328015306837 | 176.0734900880556
```

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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.013499382685245327 | 0.016085967030890914 | 0.014062858114292679
L_1 Model | 0.1374416653875065 | 0.13081120494045734 | 0.1425706482457309
L_inf Model |4.123249961625195 | 3.9243361482137202 | 4.277119447371927
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.01811270124466558 | 0.018139438173941418 | 0.021578814672670442
L_1 Model | 0.15129302090387506 | 0.15115310072181126 | 0.16388770757099552
L inf Model | 151.29302090387506 | 151.15310072181126 | 163.88770757099553
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01836494334840313 | 0.020616546465203448 | 0.023941239912593514
L_1 Model | 0.14688834208972787 | 0.14146647609786295 | 0.19300674644327778
L_inf Model |4.406650262691836 | 4.243994282935889 | 5.790202393298333
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.019954625722984832 | 0.02009395211604993 | 0.024845952561566614
 L 1 Model | 0.15678943939460993 | 0.1560642563825354 | 0.17791271383917867
L inf Model | 156.78943939460993 | 156.0642563825354 | 177.91271383917868
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.01977439659798246 | 0.023341171632482092 | 0.02400850911734353
 L_1 Model | 0.1491691531435136 | 0.13609773657351282 | 0.168581544897101
```

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Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.020197943031174215 | 0.02021148145235356 | 0.02248442769788625
L_1 Model |0.15856663652556244 | 0.15845711980105193 | 0.1682351076162827
L_inf Model | 158.56663652556244 | 158.45711980105193 | 168.23510761628268
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L_2 Model | 0.023272401838622128 | 0.026282207199102556 | 0.037756658929304035
L_1 Model | 0.17567463117836707 | 0.1682102648589518 | 0.23991638474877602
L_inf Model |5.270238935351012 | 5.046307945768554 | 7.197491542463281
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.020592790241771863 | 0.020615236170335578 | 0.0212975800839843
 L_1 Model | 0.16135105956172308 | 0.1612602919183508 | 0.16303059973182218
L_inf Model | 161.35105956172308 | 161.26029191835082 | 163.03059973182218
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.025561731373163518 | 0.02700896285585302 | 0.04095806026468084
 L 1 Model | 0.16237515903538105 | 0.15329995913498928 | 0.24184609096281534
L inf Model |4.871254771061431 | 4.5989987740496785 | 7.25538272888446
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.019664026005465223 | 0.019730992903327672 | 0.023746824457817946
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L 1 Model | 0.15879953665174926 | 0.1584758139969644 | 0.1759517818375853
L_inf Model | 158.79953665174926 | 158.4758139969644 | 175.95178183758532
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.018740472294329028 | 0.020933606503146115 | 0.02866589521652946
L_1 Model | 0.1557593917770396 | 0.15048554286773666 | 0.2130017324151519
L_inf Model | 4.672781753311188 | 4.5145662860321 | 6.3900519724545575
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L 2 Model | 0.021154136065387248 | 0.021179284315651997 | 0.025332955417215842
L_1 Model | 0.16459562459493282 | 0.16444944258245328 | 0.1807055582238245
L inf Model | 164.59562459493281 | 164.4494425824533 | 180.7055582238245
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.022242110070891653 | 0.02400775720521399 | 0.034131974670979184
L_1 Model | 0.15869005354073515 | 0.14739314359056352 | 0.22613158746331788
L inf Model |4.760701606222055 | 4.4217943077169055 | 6.783947623899536
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.0197634341675143 | 0.01982160668589218 | 0.026455292665964133
 L 1 Model | 0.15845402911250941 | 0.15811057197664155 | 0.18394812172343328
L inf Model | 158.4540291125094 | 158.11057197664155 | 183.94812172343327
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
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L 2 Model | 0.017491947452888276 | 0.023213383084767725 | 0.02198782403340773
L_1 Model | 0.15540583284476012 | 0.1401896601199901 | 0.18767401773164544
L inf Model | 4.662174985342803 | 4.205689803599703 | 5.630220531949363
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02055199785119886 | 0.020596709192683648 | 0.0274072573953328
L_1 Model |0.16081213330529476 | 0.16051348235361723 | 0.1891471656638954
L_inf Model | 160.81213330529476 | 160.51348235361723 | 189.14716566389538
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L 2 Model | 0.01752766841269136 | 0.022876187775553662 | 0.02172128892139564
 L 1 Model | 0.15198214131621757 | 0.13898286462774895 | 0.179182242341092
L_inf Model |4.559464239486527 | 4.1694859388324685 | 5.37546727023276
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.019723822233585493 | 0.01981149735224863 | 0.01994437617311476
 L_1 Model | 0.15830820611167745 | 0.1579533536186054 | 0.15985032233238264
L inf Model | 158.30820611167746 | 157.9533536186054 | 159.85032233238263
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.017237742295462686 | 0.0198913753113182 | 0.026700130610797658
 L 1 Model | 0.15452045528683148 | 0.14924771737670436 | 0.19780218185001752
L inf Model | 4.635613658604944 | 4.477431521301131 | 5.934065455500526
```

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Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.019603675781241208 | 0.019644203944078037 | 0.026562389456833986
 L_1 Model |0.1588895428490465 | 0.1586832389091324 | 0.1864418865107403
L_inf Model | 158.8895428490465 | 158.6832389091324 | 186.44188651074032
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02021587831923378 | 0.02194420063035372 | 0.02839060931181086
L_1 Model | 0.16890493649783195 | 0.16127066417244648 | 0.20900082028351893
L inf Model |5.067148094934958 | 4.838119925173395 | 6.270024608505568
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.020167929598441117 | 0.020259476682990444 | 0.022074257023379132
L_1 Model |0.1615694442155779 | 0.161161882769433 | 0.16728410797673182
L inf Model | 161.5694442155779 | 161.161882769433 | 167.28410797673183
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.015055036514925624 | 0.017204557930210005 | 0.01782540718920499
L 1 Model | 0.13978420950322593 | 0.1318113528920079 | 0.16488804970680995
L inf Model |4.193526285096778 | 3.954340586760237 | 4.946641491204298
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.0194274902233011 | 0.01947533086830826 | 0.022905709815673466
 L_1 Model |0.15791806679017686 | 0.15765322473828938 | 0.17367316793498902
L inf Model | 157.91806679017685 | 157.6532247382894 | 173.673167934989
```

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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model | 0.016650448363992425 | 0.020698016535881214 | 0.022569858873778586
L_1 Model |0.14726263832033928 | 0.13669701540107532 | 0.1850684383999022
L inf Model |4.417879149610179 | 4.100910462032259 | 5.5520531519970655
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.019581855116755528 | 0.019652725721338006 | 0.020407515313740264
L 1 Model | 0.15945325456306342 | 0.15918409779511922 | 0.1638651051527742
L_inf Model |159.4532545630634 | 159.18409779511921 | 163.8651051527742
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.015142278335053005 | 0.016024649624925297 | 0.020676669278926123
 L_1 Model |0.1291153352449778 | 0.1214319032992137 | 0.1723113738567438
L_inf Model |3.8734600573493347 | 3.642957098976411 | 5.169341215702314
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.02037787938167375 | 0.020429517328455105 | 0.024006202983601076
 L 1 Model | 0.1615470882453407 | 0.16118465269610247 | 0.1774422284380188
L inf Model | 161.5470882453407 | 161.18465269610246 | 177.4422284380188
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.016362755048176407 | 0.017546011575480306 | 0.018918371012604247
 L_1 Model |0.14203823418901337 | 0.13593990336994316 | 0.1561397725101537
L_inf Model |4.261147025670401 | 4.0781971010982945 | 4.684193175304611
```

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Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.019432087925893977 | 0.019488063518607657 | 0.02193693112399669
L_1 Model | 0.15698298396298488 | 0.1567444097053316 | 0.16851314508138174
L_inf Model | 156.9829839629849 | 156.7444097053316 | 168.51314508138174
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.013527900533876541 | 0.016314028469915587 | 0.015367107786566015
L_1 Model | 0.13778103261865168 | 0.12985367243409293 | 0.15120134705563568
L inf Model |4.13343097855955 | 3.8956101730227877 | 4.53604041166907
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model | 0.01974273002640424 | 0.019764742726281165 | 0.02244681796181545
L_1 Model | 0.15840756841798964 | 0.15826224782023035 | 0.16734664826496917
L_inf Model | 158.40756841798964 | 158.26224782023036 | 167.34664826496916
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.017329667349628826 | 0.01827908359260939 | 0.023331785416344456
 L 1 Model | 0.1360414504604143 | 0.13141162577753873 | 0.17333293523015064
L inf Model | 4.081243513812429 | 3.942348773326162 | 5.19998805690452
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.018911580669392993 | 0.018968582440108465 | 0.021693228389465843
 L_1 Model | 0.15430817193116925 | 0.15399863528142896 | 0.16541886430406674
```

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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.018065773363269675 | 0.023836068160838917 | 0.02175465803170375
L_1 Model | 0.15410306845227023 | 0.13269114814741748 | 0.17953911697787242
L_inf Model |4.623092053568107 | 3.9807344444225246 | 5.386173509336173
Table: Different test losses for different models
 Model
         | L 2 loss | L 2 loss | L inf loss
 L_2 Model |0.019210289324323428 | 0.019229290137182543 | 0.021620044224097343
L 1 Model | 0.1541298104902452 | 0.15403715556870456 | 0.16328457184107978
L_inf Model | 154.1298104902452 | 154.03715556870458 | 163.28457184107978
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.010955079040904132 | 0.012087418061012207 | 0.013953989689533824
 L_1 Model |0.12116968644408803 | 0.11111322812268538 | 0.13643245781459754
L_inf Model |3.6350905933226407 | 3.3333968436805614 | 4.092973734437926
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.020879712894578857 | 0.020897541168548663 | 0.021918805237831226
 L 1 Model | 0.16219608515459433 | 0.16215730282258986 | 0.16638569119627766
L inf Model | 162.19608515459433 | 162.15730282258986 | 166.38569119627766
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02413419926660108 | 0.02713641729963268 | 0.038006551331576086
```

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L 1 Model | 0.16447772313655687 | 0.15984272310192954 | 0.2301055912439382
L_inf Model |4.934331694096706 | 4.795281693057886 | 6.903167737318146
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.01973481694573114 | 0.019789920356076646 | 0.02392646978576763
L_1 Model | 0.1593839575105546 | 0.15917578998180562 | 0.1739338521700883
L_inf Model |159.38395751055458 | 159.17578998180562 | 173.9338521700883
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L 2 Model | 0.017285262633502736 | 0.020103267701723042 | 0.019352324340646508
L 1 Model | 0.15573737342537144 | 0.14950408825509684 | 0.169306217701957
L inf Model |4.672121202761144 | 4.485122647652905 | 5.07918653105871
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model | 0.020649829177498226 | 0.020699132840563385 | 0.022965511612375613
L_1 Model |0.16129086984669688 | 0.16108754099253111 | 0.1717141522387046
L inf Model | 161.2908698466969 | 161.0875409925311 | 171.7141522387046
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.011951205192693727 | 0.01332473435416138 | 0.013112337289141785
 L 1 Model | 0.1267929785629277 | 0.11987938548873471 | 0.1384828467523744
L_inf Model |3.803789356887831 | 3.596381564662041 | 4.1544854025712326
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
```

```
L 2 Model | 0.02095718852128461 | 0.021007454703398615 | 0.02427289822921936
L_1 Model | 0.16431753955228207 | 0.1641597132773084 | 0.17651457262661066
L inf Model | 164.31753955228206 | 164.1597132773084 | 176.51457262661066
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.012802181297566726 | 0.01565872241117478 | 0.015945268529325908
L_1 Model |0.13227408224332096 | 0.12604004044783015 | 0.15160663047754072
L_inf Model |3.968222467299629 | 3.7812012134349047 | 4.548198914326222
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L_2 Model |0.019897018078976654 | 0.019947353125676817 | 0.02334021393730012
 L 1 Model | 0.15926385096916276 | 0.1590130445504282 | 0.17220847022481703
L_inf Model |159.26385096916277 | 159.0130445504282 | 172.20847022481703
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.011998827749818976 | 0.012655207021677857 | 0.013854346256913511
L_1 Model | 0.12267503471729185 | 0.11832123894379477 | 0.13116768073388843
L inf Model |3.6802510415187557 | 3.549637168313843 | 3.935030422016653
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.020726168762113875 | 0.020841492290756228 | 0.02578484836591248
 L 1 Model | 0.16394945872625866 | 0.16353963302973848 | 0.1836587884367355
L inf Model | 163.94945872625865 | 163.53963302973847 | 183.6587884367355
```

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Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.014682774735602205 | 0.015305492138244475 | 0.0199056024233583
 L 1 Model | 0.13122822073980817 | 0.1264320627812644 | 0.169396653519
L_inf Model |3.9368466221942446 | 3.792961883437932 | 5.081899605569999
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01923676055495136 | 0.01932230558485573 | 0.022608050856021467
L_1 Model | 0.1591989502124915 | 0.15885934311366687 | 0.17211994379488457
L inf Model | 159.1989502124915 | 158.85934311366688 | 172.11994379488456
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.025205021105789968 | 0.026142179461571335 | 0.02730418095417095
L_1 Model | 0.18047562955679822 | 0.17296765113552642 | 0.200585108531473
L inf Model | 5.414268886703947 | 5.189029534065793 | 6.01755325594419
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.01959579689594081 | 0.019644920476908436 | 0.022805089237441827
L 1 Model | 0.1571242257654945 | 0.15685798723142627 | 0.17012814994296294
L inf Model | 157.12422576549451 | 156.85798723142628 | 170.12814994296295
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.01513099192632439 | 0.01617780537166983 | 0.019352457996298845
 L_1 Model | 0.1415798029613482 | 0.13568234291855905 | 0.17559976134126504
L inf Model |4.247394088840446 | 4.0704702875567715 | 5.267992840237951
```

```
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.021219509406255225 | 0.021260214296801565 | 0.026767345066218286
L_1 Model | 0.1622021353765534 | 0.1620312342289163 | 0.18336670019700405
L inf Model | 162.2021353765534 | 162.0312342289163 | 183.36670019700404
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.009924245822362539 | 0.011738650823488307 | 0.013375915313151255
L 1 Model | 0.11628713536101044 | 0.10889983247754288 | 0.13929304298798015
L inf Model | 3.4886140608303133 | 3.2669949743262863 | 4.178791289639404
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L_2 Model | 0.02136743412476164 | 0.02149674902032545 | 0.02508195487182669
 L_1 Model |0.1634146559150387 | 0.1629548866173102 | 0.1785591515348317
L_inf Model | 163.4146559150387 | 162.9548866173102 | 178.5591515348317
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.013051520924531738 | 0.01602569002487886 | 0.021229308419666706
 L 1 Model | 0.12255708244003279 | 0.11094635405417116 | 0.17506688472448004
L inf Model |3.6767124732009835 | 3.328390621625135 | 5.252006541734401
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.021680098303547248 | 0.0217313936226797 | 0.02288702745647245
 L 1 Model | 0.16839334563239403 | 0.16820721397952385 | 0.1724605472268547
L_inf Model | 168.39334563239402 | 168.20721397952386 | 172.4605472268547
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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.015230585533031112 | 0.016052676130737922 | 0.03383360129465273
L_1 Model | 0.12540665770686232 | 0.11868313065667424 | 0.23412016891482187
L_inf Model |3.7621997312058695 | 3.560493919700227 | 7.023605067444656
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.020597791373749237 | 0.020660041573519007 | 0.025976212650909984
L_1 Model | 0.16164353683965044 | 0.16145117085490335 | 0.18435071653876753
L_inf Model | 161.64353683965044 | 161.45117085490335 | 184.35071653876753
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.016912914897551132 | 0.020671372217000997 | 0.019026175586283153
L_1 Model | 0.14693597072225117 | 0.13786810510919562 | 0.16648746012627302
L_inf Model |4.4080791216675355 | 4.136043153275868 | 4.9946238037881905
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.019083270038514892 | 0.01915651955807651 | 0.021404688029841402
 L 1 Model | 0.1533905392845693 | 0.1530946491118694 | 0.16554520156759908
L inf Model | 153.39053928456931 | 153.09464911186942 | 165.5452015675991
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.013723693906968672 | 0.014733303676033352 | 0.021763337603765386
 L_1 Model | 0.13427436299653678 | 0.13066550686980838 | 0.18476040986730563
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Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.020637932343063624 | 0.020733869639916788 | 0.024349830719806082
L_1 Model | 0.16270619090524913 | 0.16243677266776463 | 0.17526312804618355
L_inf Model | 162.70619090524912 | 162.43677266776461 | 175.26312804618354
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L_2 Model |0.02319895475139062 | 0.02936023098548153 | 0.02479326314737297
L 1 Model | 0.19158480808733186 | 0.18041977043144836 | 0.20032210357712238
L_inf Model |5.747544242619956 | 5.41259311294345 | 6.0096631073136715
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.019627027350002317 | 0.019683061131496277 | 0.021026553634504536
 L_1 Model | 0.15860899997735142 | 0.15836980866583567 | 0.16345478162425972
L_inf Model | 158.60899997735143 | 158.36980866583568 | 163.4547816242597
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model |0.011410710588638358 | 0.015110213818633948 | 0.01545689991408798
 L 1 Model | 0.12080098786770023 | 0.10700541958516063 | 0.15395676968851682
L inf Model |3.6240296360310067 | 3.210162587554819 | 4.618703090655504
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.018153310875722105 | 0.018203259867925634 | 0.019938233152866844
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L 1 Model | 0.15291165409785656 | 0.15260801178150757 | 0.16001075254121408
L_inf Model |152.91165409785657 | 152.60801178150757 | 160.0107525412141
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.012636556801984456 | 0.014506896179645363 | 0.01876420845278531
L_1 Model | 0.12448618488381642 | 0.11888972792721372 | 0.16478980512273483
L_inf Model |3.734585546514493 | 3.566691837816412 | 4.943694153682045
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L 2 Model | 0.022061944503824392 | 0.022164257349278686 | 0.0247253777954714
L_1 Model | 0.1688492124037648 | 0.16842098316367865 | 0.17963839325236963
L inf Model | 168.8492124037648 | 168.42098316367864 | 179.63839325236964
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model | 0.016967733802976677 | 0.019577760567786547 | 0.023171660350710666
L_1 Model | 0.1490197832347463 | 0.13867623669275375 | 0.19298057129470897
L inf Model | 4.470593497042389 | 4.160287100782613 | 5.789417138841269
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.020115628507160893 | 0.020140084938659108 | 0.023632742327445614
 L_1 Model | 0.1579125518707904 | 0.15775343314777912 | 0.17313141738948154
L inf Model | 157.9125518707904 | 157.75343314777913 | 173.13141738948153
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
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L 2 Model | 0.018637390064418998 | 0.021042291771659748 | 0.025182362687570823
L_1 Model | 0.1590142885920043 | 0.15370590982600987 | 0.18612234807784905
L inf Model | 4.770428657760129 | 4.611177294780296 | 5.583670442335472
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.019680716133109587 | 0.019746743485291474 | 0.024701782885019487
L_1 Model |0.1592742440304859 | 0.15897048369332661 | 0.18010134734329367
L_inf Model |159.2742440304859 | 158.97048369332663 | 180.10134734329367
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L 2 Model | 0.012988152693761542 | 0.015593325135829336 | 0.013326872353477303
 L 1 Model | 0.1434568061636711 | 0.1372398314631275 | 0.14524948234389334
L_inf Model |4.303704184910133 | 4.117194943893825 | 4.3574844703168
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.020477836388927084 | 0.02063394815464747 | 0.0213478937391193
L_1 Model | 0.16227711631526145 | 0.16183485780822743 | 0.16528481530461453
L inf Model | 162.27711631526145 | 161.83485780822744 | 165.28481530461454
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.011879801208010814 | 0.01337183175912941 | 0.01945320329340185
 L 1 Model | 0.12585357568220518 | 0.11822617339245008 | 0.172036447992256
L inf Model | 3.7756072704661556 | 3.546785201773502 | 5.16109343976768
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Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02013326826932213 | 0.020159561424765524 | 0.022267258961798864
 L 1 Model | 0.16084066133831382 | 0.1606777529168794 | 0.16967190043696675
L_inf Model | 160.84066133831382 | 160.6777529168794 | 169.67190043696675
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.018296771643987894 | 0.021317833025841025 | 0.02132971396681544
L_1 Model | 0.1547039153023414 | 0.1434282367797971 | 0.17974013231250632
L inf Model |4.641117459070242 | 4.302847103393913 | 5.392203969375189
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.01894547959831914 | 0.01902809815558252 | 0.02212946076990061
L_1 Model |0.15528680084316898 | 0.15511074985085 | 0.16831689049167156
L inf Model | 155.28680084316898 | 155.11074985085 | 168.31689049167156
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02066032646986726 | 0.024334296173379715 | 0.022335301146537763
L 1 Model | 0.1671250979907497 | 0.16497685003423096 | 0.17363311687603616
L inf Model | 5.013752939722491 | 4.949305501026929 | 5.208993506281085
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.021155537290622375 | 0.021265889334404455 | 0.024629826097550427
 L_1 Model |0.16356201648602364 | 0.16311009800957385 | 0.17679917080301347
L inf Model | 163.56201648602365 | 163.11009800957385 | 176.79917080301345
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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02051850469557437 | 0.02306682737292338 | 0.03192851601058286
L_1 Model | 0.1507086325707789 | 0.14570108202552137 | 0.21811418238640357
L_inf Model |4.5212589771233676 | 4.371032460765641 | 6.543425471592107
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01976920943330998 | 0.019828880270717112 | 0.02264172361849981
L 1 Model | 0.16075489820430164 | 0.16046211865176413 | 0.17278662194509076
L_inf Model | 160.75489820430164 | 160.46211865176414 | 172.78662194509076
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L_2 Model |0.01971487781403823 | 0.021206323173935393 | 0.023113946279782478
 L_1 Model | 0.15802948804334732 | 0.14931907324644253 | 0.17308048488809796
L_inf Model |4.740884641300419 | 4.479572197393276 | 5.192414546642939
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.01933785964906126 | 0.019389728096225085 | 0.022677934182296983
 L 1 Model | 0.156371763798297 | 0.15616114452747654 | 0.16996812096714123
L inf Model | 156.371763798297 | 156.16114452747652 | 169.96812096714123
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.0145004432522264 | 0.01646433729880497 | 0.018712187720127074
 L 1 Model | 0.14702517004066962 | 0.13478136200573754 | 0.17409058913425465
L_inf Model |4.410755101220088 | 4.043440860172126 | 5.222717674027639
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Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.019159104022239703 | 0.019285903154970675 | 0.024097402509328198
L_1 Model | 0.1576601545253367 | 0.1573227482638951 | 0.17698529835821453
L_inf Model |157.66015452533668 | 157.3227482638951 | 176.98529835821452
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.015549001374093903 | 0.017218333812258922 | 0.024458986107272398
L_1 Model |0.14168187813249034 | 0.13005761318228043 | 0.1819932680647362
L inf Model | 4.25045634397471 | 3.9017283954684125 | 5.459798041942086
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01978805571349212 | 0.01982421027306172 | 0.02808710289110733
L_1 Model | 0.15862192997818914 | 0.1584895842980625 | 0.19043530962826097
L_inf Model | 158.62192997818914 | 158.4895842980625 | 190.43530962826097
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L_2 Model |0.014410545759534031 | 0.015495737351051768 | 0.020852100296210728
 L 1 Model |0.12384816807912209 | 0.11903248749243237 | 0.18165437623219116
L inf Model |3.7154450423736627 | 3.570974624772971 | 5.449631286965735
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.01945309185050201 | 0.019515409445183044 | 0.024855681606709347
 L_1 Model |0.15518292737095737 | 0.15495519607483457 | 0.17722363725888016
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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.015234116018721811 | 0.01633614457737872 | 0.016986924183464414
L_1 Model | 0.14363479807085908 | 0.1374107008373534 | 0.16429025918692877
L_inf Model |4.309043942125772 | 4.122321025120602 | 4.928707775607863
Table: Different test losses for different models
         | L 2 loss | L 2 loss | L inf loss
 Model
L_2 Model |0.020000682103627227 | 0.02004324689409589 | 0.0268070836012368
L_1 Model | 0.15668775574763014 | 0.15646625530235428 | 0.1840648143232776
L_inf Model | 156.68775574763015 | 156.46625530235428 | 184.0648143232776
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.019249776851256957 | 0.02167582121243036 | 0.025188801011301186
 L_1 Model | 0.16556864191358972 | 0.15127446670084208 | 0.1932580959557986
L_inf Model | 4.9670592574076915 | 4.538234001025263 | 5.797742878673958
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.01982829275497404 | 0.019866691423215725 | 0.02551107359836104
 L 1 Model | 0.1585079989632902 | 0.15831769573726495 | 0.1797486251738897
L inf Model | 158.50799896329022 | 158.31769573726496 | 179.7486251738897
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.015218662733003313 | 0.015999915720463928 | 0.018835981452782695
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L 1 Model | 0.13428287507717032 | 0.12934973954728618 | 0.15878097153284976
L_inf Model |4.028486252315109 | 3.8804921864185857 | 4.7634291459854925
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.018607674899405492 | 0.018624462349836543 | 0.020678636803419657
L_1 Model | 0.15408312752441697 | 0.15404428706066228 | 0.162040911228006
L_inf Model | 154.08312752441697 | 154.04428706066227 | 162.04091122800602
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L 2 Model | 0.021702338092502608 | 0.02522234758578412 | 0.025396990583067606
L_1 Model | 0.17743721212872085 | 0.1629406438358205 | 0.19206896537832824
L inf Model |5.323116363861626 | 4.888219315074615 | 5.762068961349847
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.019924465484705584 | 0.019962291226136415 | 0.023853144853818634
L_1 Model | 0.15987780165587095 | 0.1597237093670153 | 0.17430520531113206
L_inf Model |159.87780165587097 | 159.7237093670153 | 174.30520531113206
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.017892213025391103 | 0.020047791983506726 | 0.023729916993718497
 L 1 Model | 0.14878906086972316 | 0.13437533159533005 | 0.18782336573996006
L inf Model | 4.463671826091694 | 4.031259947859901 | 5.634700972198802
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
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L 2 Model | 0.019132688309802838 | 0.019302820294533566 | 0.021254737962056836
L_1 Model | 0.15599694479977202 | 0.15542263916321056 | 0.16471498652256122
L inf Model | 155.99694479977202 | 155.42263916321056 | 164.71498652256122
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02189545216184751 | 0.023705101866113472 | 0.023506814507597472
L_1 Model | 0.1783002330026714 | 0.1730450296060498 | 0.18895614164347913
L_inf Model |5.349006990080142 | 5.1913508881814945 | 5.668684249304373
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L 2 Model | 0.02022110723888837 | 0.020274556470250574 | 0.024505509442443292
 L 1 Model |0.15931087222949078 | 0.15913433910142907 | 0.17737765430340338
L_inf Model |159.31087222949077 | 159.13433910142908 | 177.37765430340338
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.016665087011594526 | 0.01933734693959089 | 0.01930133246763229
 L_1 Model | 0.1532581739575972 | 0.14125202946408452 | 0.16906410099365962
L inf Model |4.5977452187279155 | 4.237560883922535 | 5.071923029809788
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.0198981819563136 | 0.019922062503307768 | 0.020572788016541825
 L 1 Model | 0.16090172812631803 | 0.16081184684892522 | 0.16422548696773043
L inf Model | 160.90172812631803 | 160.81184684892523 | 164.22548696773043
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Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.018395087415808746 | 0.02176688924929463 | 0.021597770472362863
 L 1 Model | 0.15595083731971174 | 0.14376913734199662 | 0.17554148143558965
L_inf Model |4.678525119591352 | 4.313074120259898 | 5.26624444306769
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.020641845406021524 | 0.02068901263944924 | 0.02184232729886155
L_1 Model | 0.1647432227737946 | 0.16460656518880476 | 0.1685235716956425
L inf Model | 164.7432227737946 | 164.60656518880475 | 168.5235716956425
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.012463765521589542 | 0.013742905040100707 | 0.015855807473978484
L_1 Model | 0.12403834383115561 | 0.11323301946019972 | 0.15003387953989883
L inf Model | 3.7211503149346683 | 3.3969905838059913 | 4.501016386196965
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model | 0.019078185554156083 | 0.019164912295524816 | 0.021939662808778786
L 1 Model | 0.15600726506626225 | 0.15567449256151195 | 0.16715648319861773
L inf Model | 156.00726506626225 | 155.67449256151195 | 167.15648319861774
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.024136397551685684 | 0.02755953862413715 | 0.038575476792060207
 L 1 Model | 0.16750427339777907 | 0.15249246662937938 | 0.25762900649696224
L inf Model | 5.025128201933372 | 4.574773998881382 | 7.7288701949088665
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Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.019668229111727022 | 0.019720745091819487 | 0.022153345921301946
L_1 Model | 0.1593903157133856 | 0.15912074048571315 | 0.16918243487799356
L_inf Model | 159.3903157133856 | 159.12074048571316 | 169.18243487799356
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.010896438991670542 | 0.01149389722358705 | 0.012140990331455123
L 1 Model | 0.11951574395819056 | 0.11303512591503971 | 0.12992829230006786
L inf Model | 3.5854723187457167 | 3.3910537774511913 | 3.8978487690020356
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L_2 Model |0.019164619922347737 | 0.019218324316147357 | 0.023444084039323437
 L_1 Model |0.15564804883121258 | 0.15544472652253388 | 0.17445301787652118
L_inf Model | 155.64804883121258 | 155.44472652253387 | 174.4530178765212
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.014999173860505633 | 0.01647441203271083 | 0.02166590352616552
 L 1 Model | 0.12757990591697366 | 0.11743332040421967 | 0.17598088803740836
L inf Model |3.8273971775092095 | 3.52299961212659 | 5.27942664112225
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.018563650161040182 | 0.018633414084809688 | 0.023152184398583495
 L 1 Model | 0.15464745391819743 | 0.1542141045081248 | 0.17292185045924205
L_inf Model | 154.6474539181974 | 154.21410450812482 | 172.92185045924205
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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.01743070839429687 | 0.021885416646320276 | 0.02402256618055198
L_1 Model | 0.14898417864205624 | 0.1328372487116067 | 0.18801090564331238
L_inf Model |4.469525359261687 | 3.9851174613482017 | 5.640327169299371
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.019910192740239946 | 0.019995633596891667 | 0.024341469932078988
L_1 Model | 0.1577792143595792 | 0.1574672422711603 | 0.17562882302227337
L inf Model | 157.7792143595792 | 157.4672422711603 | 175.62882302227337
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model | 0.021631972299723946 | 0.02464361204457324 | 0.02858957597052702
L_1 Model | 0.16326686864077125 | 0.1532965805895999 | 0.20046277014773603
L_inf Model |4.898006059223137 | 4.598897417687997 | 6.013883104432081
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.017791906165024178 | 0.017816349176864737 | 0.018584144006080546
 L 1 Model | 0.14720818847662584 | 0.1471002344147896 | 0.1504316314035534
L inf Model | 147.20818847662585 | 147.10023441478958 | 150.43163140355338
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.007676487580082631 | 0.008539592707031533 | 0.011826462207424972
 L_1 Model |0.09957918129959377 | 0.09304880532731487 | 0.1315207407040602
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Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.021283165150503693 | 0.021317520764528912 | 0.02346928204300176
L_1 Model | 0.16493516394278585 | 0.1648177331264314 | 0.17346788350011652
L_inf Model | 164.93516394278583 | 164.8177331264314 | 173.46788350011653
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.018642587661358498 | 0.02001829309830958 | 0.024125806674729574
L_1 Model | 0.15567036086371305 | 0.1524182817878216 | 0.1927326475049339
L_inf Model |4.670110825911392 | 4.572548453634648 | 5.781979425148017
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.020180799149149487 | 0.020320438857294496 | 0.022039922824541994
 L_1 Model | 0.1628152895745409 | 0.16228214592026274 | 0.17120876553548878
L_inf Model | 162.81528957454088 | 162.28214592026274 | 171.20876553548877
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.012865894449836377 | 0.014414279938540532 | 0.019452161055759195
 L 1 Model | 0.13043305250188955 | 0.11795181328724133 | 0.17526897719371312
L_inf Model |3.9129915750566866 | 3.53855439861724 | 5.258069315811394
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02037042517126739 | 0.020465622769380725 | 0.021617497097444066
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L 1 Model | 0.16052964056666927 | 0.1602423983027416 | 0.1654438956850926
L_inf Model | 160.52964056666926 | 160.24239830274158 | 165.4438956850926
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.010226737593526429 | 0.011075121017153458 | 0.013902433474798088
L_1 Model | 0.11486876252837201 | 0.11104785308596775 | 0.14340314471763035
L_inf Model |3.4460628758511604 | 3.3314355925790324 | 4.30209434152891
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L 2 Model | 0.018300592889112014 | 0.01835691405099676 | 0.018935504233077053
L_1 Model | 0.15358876627185897 | 0.15339675942591843 | 0.15676695656329848
L inf Model | 153.58876627185896 | 153.39675942591845 | 156.76695656329846
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.009260912037011255 | 0.010280332864352879 | 0.015871585768407546
L_1 Model | 0.10858292627414928 | 0.10498921020935302 | 0.15822525404900772
L_inf Model |3.2574877882244784 | 3.1496763062805906 | 4.746757621470231
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.018240168775122047 | 0.0182870257431411 | 0.02290368628885629
 L 1 Model |0.1535094200814326 | 0.15326835949636258 | 0.17114399583432113
L inf Model | 153.50942008143258 | 153.2683594963626 | 171.14399583432115
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
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L 2 Model |0.02220277029661513 | 0.02584031645344972 | 0.0502212329603811
L_1 Model | 0.15667850641528322 | 0.15169452169877265 | 0.27185727280698824
L inf Model |4.700355192458496 | 4.5508356509631795 | 8.155718184209647
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01988313316528747 | 0.020027368616006104 | 0.02155888351241826
L_1 Model |0.1575542407929551 | 0.1571006272833868 | 0.1645588145400685
L_inf Model |157.5542407929551 | 157.1006272833868 | 164.55881454006848
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.014421472616411465 | 0.016977330338835004 | 0.019249631273132742
 L 1 Model | 0.13547743877935195 | 0.12973967982026366 | 0.17153352374126118
L_inf Model |4.064323163380559 | 3.8921903946079097 | 5.1460057122378355
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.02267065548708689 | 0.022808134040632134 | 0.024365055418285028
 L_1 Model | 0.17062743818948659 | 0.17016398537839075 | 0.17696758756668993
L inf Model | 170.62743818948658 | 170.16398537839075 | 176.96758756668993
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.021215086344610765 | 0.030223260414757983 | 0.025197856811696347
 L 1 Model | 0.1811874806866053 | 0.1735890516054824 | 0.1936347368094837
L_inf Model |5.43562442059816 | 5.207671548164472 | 5.8090421042845115
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Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01847228128726503 | 0.018499607061679312 | 0.022132731362703963
 L 1 Model | 0.15475535736425494 | 0.15458744157437543 | 0.17040967563475884
L_inf Model | 154.75535736425493 | 154.58744157437542 | 170.40967563475883
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.018675642445324023 | 0.022799453976208896 | 0.021249237484277327
L_1 Model |0.15840403778152898 | 0.14653847119027047 | 0.1783386597576561
L inf Model |4.752121133445869 | 4.396154135708114 | 5.3501597927296825
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.01973915612602359 | 0.01978525769133186 | 0.021245832115962135
L_1 Model | 0.15868821520551887 | 0.158453491326447 | 0.16555146851689076
L inf Model | 158.68821520551887 | 158.45349132644702 | 165.55146851689076
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.02293251134122 | 0.025397594673272947 | 0.04027351889424092
L 1 Model | 0.16517167440591363 | 0.154894072032652 | 0.25290606895517576
L inf Model | 4.955150232177409 | 4.646822160979561 | 7.587182068655272
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.019262919498569283 | 0.019335053497993686 | 0.024852463405811466
 L_1 Model | 0.15669056895360495 | 0.156468068616311 | 0.17941513379774102
L inf Model | 156.69056895360495 | 156.468068616311 | 179.41513379774102
```

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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01325503741124588 | 0.015464410132610731 | 0.019444151845486705
L_1 Model | 0.12931153046540325 | 0.1140333515913906 | 0.17703899688388977
L inf Model | 3.8793459139620974 | 3.421000547741718 | 5.311169906516693
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02093531043895335 | 0.020979305442617516 | 0.022591387398251693
L 1 Model | 0.1628642859246258 | 0.16255642121448385 | 0.17080883344149406
L inf Model | 162.8642859246258 | 162.55642121448386 | 170.80883344149404
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L_2 Model |0.00731219014310136 | 0.008170934327541112 | 0.008280707490287352
 L_1 Model | 0.10307037765003084 | 0.0955193656946656 | 0.11230224439893213
L_inf Model |3.0921113295009253 | 2.865580970839968 | 3.369067331967964
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.02019884426718423 | 0.02025993821346957 | 0.02235793158861904
 L 1 Model | 0.16129303001282844 | 0.1610523580629436 | 0.16886848442409966
L inf Model | 161.29303001282844 | 161.0523580629436 | 168.86848442409965
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.020260982026113556 | 0.028330768188348288 | 0.029569912276552663
 L 1 Model | 0.1492884416893378 | 0.1253787611597231 | 0.2082780713008079
L_inf Model | 4.478653250680134 | 3.761362834791693 | 6.248342139024237
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Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.01956095135176804 | 0.019612467225806222 | 0.022908676182677615
L_1 Model | 0.1577077184100725 | 0.15742862351273054 | 0.17006363698262444
L_inf Model |157.7077184100725 | 157.42862351273055 | 170.06363698262444
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.01340753580099246 | 0.01598899975716276 | 0.02082383287608217
L_1 Model | 0.13778452945078418 | 0.12550148110449652 | 0.18151797303406053
L inf Model |4.133535883523526 | 3.7650444331348956 | 5.445539191021816
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.0189337528611844 | 0.018976438518614292 | 0.02206798711003176
L_1 Model |0.15514417631047098 | 0.1549863978124863 | 0.1686206397750051
L_inf Model | 155.14417631047098 | 154.9863978124863 | 168.62063977500512
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.012575106315398061 | 0.013484720542825505 | 0.01448383674737769
 L 1 Model |0.1342100108958772 | 0.12609891221409195 | 0.15235516443225358
L inf Model | 4.026300326876316 | 3.782967366422758 | 4.570654932967607
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.019471325962201386 | 0.019548782311113642 | 0.022447593521861715
 L_1 Model | 0.15478938764824562 | 0.15442358001644338 | 0.16693458104740957
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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.016453368497315594 | 0.017744454452130184 | 0.020173813620290398
L_1 Model | 0.1488542319744318 | 0.14309015821585203 | 0.1745457024424775
L_inf Model |4.465626959232954 | 4.292704746475561 | 5.2363710732743245
Table: Different test losses for different models
         | L 2 loss | L 2 loss | L inf loss
 Model
 L_2 Model |0.01832766839189119 | 0.018381684700945474 | 0.019398262024238284
L 1 Model | 0.15256588653419376 | 0.15231940155604323 | 0.1580627267186584
L_inf Model | 152.56588653419377 | 152.31940155604323 | 158.0627267186584
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.018326357430113686 | 0.019887402011460154 | 0.02445502267020485
 L_1 Model | 0.1494618503182919 | 0.14279813978997694 | 0.18879570154670924
L_inf Model |4.483855509548757 | 4.283944193699308 | 5.663871046401277
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.02058546048009225 | 0.02070300733107181 | 0.02985364372736991
 L_1 Model | 0.16274790053546667 | 0.1622702667998228 | 0.1950208385206415
L_inf Model | 162.74790053546667 | 162.2702667998228 | 195.0208385206415
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.02232958705158429 | 0.02608763906815111 | 0.03355029236896926
```

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L 1 Model | 0.1729497377177192 | 0.165111628179511 | 0.22798980123630078
L_inf Model |5.188492131531576 | 4.95334884538533 | 6.839694037089023
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.02036048342409574 | 0.020425728176678093 | 0.021708676170754306
L_1 Model |0.16241458778577775 | 0.16203798789120744 | 0.1661627897229586
L_inf Model | 162.41458778577774 | 162.03798789120742 | 166.1627897229586
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L 2 Model | 0.015464924356253058 | 0.015672833934431286 | 0.020962212563825057
L_1 Model | 0.13633425213403333 | 0.1335258292455894 | 0.18176351851834477
L inf Model |4.090027564021 | 4.005774877367682 | 5.452905555550343
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model | 0.018822352955328213 | 0.018858430736725842 | 0.021332442077822245
L_1 Model | 0.15511659861247307 | 0.15484805979980745 | 0.16496505126033256
L_inf Model | 155.11659861247307 | 154.84805979980746 | 164.96505126033256
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.017142281333688322 | 0.018629269842613143 | 0.02256163620113681
 L 1 Model | 0.15205409714245827 | 0.14671784190795473 | 0.1905110211451346
L_inf Model |4.561622914273748 | 4.401535257238642 | 5.715330634354038
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
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L 2 Model | 0.020877138635673562 | 0.02096253500350962 | 0.024002585690544278
L_1 Model | 0.16431975747381775 | 0.16395742400909197 | 0.1772519853945032
L inf Model | 164.31975747381776 | 163.95742400909197 | 177.2519853945032
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.021221285142853288 | 0.02256200126571976 | 0.030872563895701036
L_1 Model | 0.15963315453181617 | 0.14898372448629285 | 0.20880224709718911
L_inf Model | 4.788994635954485 | 4.469511734588785 | 6.264067412915673
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L_2 Model | 0.019413705888568618 | 0.019452660625268233 | 0.021110059531041846
 L 1 Model | 0.15580619547705224 | 0.15561469520600282 | 0.163214018161097
L_inf Model | 155.80619547705223 | 155.61469520600284 | 163.21401816109702
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.009611052805368522 | 0.011957372041937801 | 0.010156503223820753
 L_1 Model | 0.11677589092745601 | 0.1074277789294698 | 0.12016379485248795
L inf Model |3.50327672782368 | 3.222833367884094 | 3.6049138455746386
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01874280927081187 | 0.018861036773991847 | 0.02283522174277905
 L 1 Model | 0.15509670726406072 | 0.1547606285728827 | 0.1736731193769552
L_inf Model |155.0967072640607 | 154.7606285728827 | 173.6731193769552
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Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01941765571628717 | 0.026106354664568118 | 0.021413583836105733
 L 1 Model | 0.16925702085922964 | 0.1534093925421335 | 0.18125751143425836
L_inf Model |5.07771062577689 | 4.602281776264006 | 5.437725343027751
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.021877849025272986 | 0.021910623231331527 | 0.025744459140189527
L_1 Model |0.16630039395472765 | 0.16611657920853506 | 0.1838071129723158
L inf Model | 166.30039395472764 | 166.11657920853506 | 183.8071129723158
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.01820648675433529 | 0.019475301640558648 | 0.0199614121602102
L_1 Model | 0.13900983648183546 | 0.13267048369846793 | 0.14937896612859358
L inf Model | 4.170295094455064 | 3.9801145109540377 | 4.4813689838578075
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.01998291713682894 | 0.0200305126997382 | 0.025115659143989843
L 1 Model | 0.15946625027343106 | 0.15929428406880947 | 0.17929760357975547
L inf Model | 159.46625027343106 | 159.29428406880947 | 179.29760357975547
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.018450985689664766 | 0.02087267649093504 | 0.020250731975862378
 L 1 Model | 0.1571344779481045 | 0.15245249193865174 | 0.16365067773261666
L inf Model | 4.714034338443136 | 4.573574758159552 | 4.9095203319784995
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Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.020546212458750567 | 0.020611762462718862 | 0.022710315086175166
L_1 Model | 0.16347898054210772 | 0.1632613760823652 | 0.1723273707717182
L_inf Model | 163.4789805421077 | 163.26137608236522 | 172.3273707717182
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.012538260998224924 | 0.013895753748328264 | 0.015483867542945753
L 1 Model | 0.11798899370380368 | 0.10929116951202014 | 0.14213990332185902
L_inf Model |3.5396698111141105 | 3.278735085360604 | 4.264197099655771
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L_2 Model | 0.020644562033257416 | 0.020744167613941007 | 0.024420418653756364
 L_1 Model | 0.16224740281800512 | 0.16191510198551226 | 0.1773493558883998
L_inf Model | 162.24740281800513 | 161.91510198551225 | 177.3493558883998
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.014883050848255376 | 0.017535087698325773 | 0.016990602094114553
 L 1 Model | 0.14722864470045113 | 0.14203253923304604 | 0.15837830514427959
L inf Model |4.416859341013534 | 4.260976176991381 | 4.751349154328388
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.020099003711389618 | 0.020196375013712818 | 0.022034123636716002
 L 1 Model | 0.16272194869271706 | 0.1624966577191577 | 0.16967216137353625
L_inf Model | 162.72194869271706 | 162.4966577191577 | 169.67216137353626
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Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.0136741696460227 | 0.01471764930070211 | 0.01712761555472535
L_1 Model | 0.13781504559071364 | 0.13326260289213862 | 0.15996108778287324
L_inf Model |4.134451367721409 | 3.9978780867641586 | 4.798832633486197
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.019633634041891754 | 0.019699209867904837 | 0.022072202249733375
L_1 Model | 0.1584848456998949 | 0.15828531303866655 | 0.17049934711065798
L inf Model | 158.48484569989492 | 158.28531303866654 | 170.49934711065796
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model | 0.012617784579312749 | 0.014634409479186823 | 0.015955675183031877
L_1 Model | 0.13545522653070446 | 0.12416364927752394 | 0.157196208014388
L_inf Model |4.063656795921134 | 3.724909478325718 | 4.71588624043164
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.021161847293423974 | 0.021214443359054737 | 0.03144216725400376
 L 1 Model | 0.16318352084404883 | 0.16292907513451618 | 0.2009338669405303
L inf Model | 163.18352084404884 | 162.92907513451618 | 200.93386694053032
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model | 0.01121163616597836 | 0.011956096584437192 | 0.014450725333954794
 L_1 Model |0.12182601411781875 | 0.11368820529382803 | 0.1457801954867022
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```
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.022285461649996674 | 0.022318869321018616 | 0.027674151288457717
L_1 Model | 0.16646826389307173 | 0.16629088731401998 | 0.19087537906643134
L_inf Model | 166.46826389307174 | 166.29088731401998 | 190.87537906643135
Table: Different training losses for different models
         | L 2 loss | L 2 loss | L inf loss
 Model
 L_2 Model |0.024255218524903328 | 0.028876679324237924 | 0.03269146238872828
L_1 Model | 0.18132797820556104 | 0.16116862965291773 | 0.22144725297570889
L_inf Model |5.439839346166831 | 4.835058889587532 | 6.643417589271267
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.01926795694083163 | 0.01934980466560897 | 0.030007287983810974
 L_1 Model |0.15617838831543523 | 0.15583534462550094 | 0.19751518601072132
L_inf Model | 156.17838831543523 | 155.83534462550094 | 197.51518601072132
Table: Different training losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.01642407941390444 | 0.01925072510977266 | 0.018515770228463558
 L 1 Model | 0.15483367644250573 | 0.1482198068239102 | 0.1771632520842692
L inf Model |4.645010293275172 | 4.446594204717306 | 5.314897562528076
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.019539903232658286 | 0.01955678099833178 | 0.02223026953356725
```

```
L 1 Model | 0.15461631475725443 | 0.1545372285219442 | 0.16558206842677872
L_inf Model | 154.61631475725443 | 154.5372285219442 | 165.58206842677873
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model | 0.016025211771295716 | 0.018334721101934136 | 0.021889805412379417
L_1 Model | 0.1503219529777137 | 0.13853659566944412 | 0.19133045407385774
L_inf Model |4.509658589331411 | 4.1560978700833235 | 5.739913622215732
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
L 2 Model | 0.020929762385419957 | 0.020975577966051342 | 0.02332256032391784
L_1 Model | 0.16463303084717876 | 0.16438821190898673 | 0.17482670808916292
L inf Model | 164.63303084717876 | 164.38821190898673 | 174.82670808916293
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model | 0.015394597456514674 | 0.0178460426789773 | 0.017624100138851077
L_1 Model | 0.1450437320294986 | 0.13437730447460156 | 0.16559210234006785
L_inf Model |4.351311960884958 | 4.031319134238046 | 4.967763070202036
Table: Different test losses for different models
 Model | L 2 loss | L 2 loss | L inf loss
 L 2 Model | 0.02011536694157592 | 0.02013040397831599 | 0.021389403941831073
 L_1 Model |0.1595135409558534 | 0.15942949345067664 | 0.1644217043398826
L inf Model | 159.51354095585341 | 159.42949345067663 | 164.4217043398826
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
```

```
L 2 Model | 0.014212430783113985 | 0.018607694331048488 | 0.02102614307949245
L_1 Model | 0.13845517509548974 | 0.12661791169980274 | 0.18676048818191818
L inf Model |4.153655252864692 | 3.7985373509940823 | 5.602814645457546
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L_2 Model |0.019487957757413896 | 0.019587542139139952 | 0.023490403613730115
L_1 Model | 0.15421246003999886 | 0.15383892735793964 | 0.17223159029975987
L_inf Model | 154.21246003999886 | 153.83892735793964 | 172.2315902997599
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.020257043417988882 | 0.022506615752218427 | 0.0221413343321421
 L 1 Model | 0.16807247500780223 | 0.15757741660607477 | 0.17897020973821143
L_inf Model |5.0421742502340665 | 4.727322498182243 | 5.369106292146343
Table: Different test losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
L_2 Model |0.02000316044272387 | 0.020017756301345658 | 0.028595818027440222
L 1 Model | 0.15751410287189047 | 0.15739369537646766 | 0.1907444525806079
L inf Model | 157.51410287189046 | 157.39369537646766 | 190.7444525806079
Table: Different training losses for different models
 Model | L_2 loss | L_2 loss | L_inf loss
 L 2 Model |0.015319153784914408 | 0.016511243401664433 | 0.02170489548230377
 L 1 Model | 0.12748815477375872 | 0.11982831693335408 | 0.16703901854832484
L inf Model | 3.8246446432127614 | 3.5948495080006224 | 5.011170556449745
```

Table: Different test losses for different models

```
Model | L_2 loss | L_2 loss | L_inf loss

L_2 Model | 0.020681091247583164 | 0.020788298340718575 | 0.02363020606328643

L_1 Model | 0.16382165989881442 | 0.16355250844388874 | 0.1758101816371747

L_inf Model | 163.82165989881443 | 163.55250844388874 | 175.8101816371747
```

Table: Different training losses for different models

```
Model | L_2 loss | L_2 loss | L_inf loss

L_2 Model | 0.01172373047121488 | 0.01296918189487667 | 0.02022248294213947

L_1 Model | 0.12133830889560228 | 0.11791427160145775 | 0.17715897624559848

L_inf Model | 3.640149266868068 | 3.537428148043732 | 5.314769287367954
```

Table: Different test losses for different models

```
Model | L_2 loss | L_2 loss | L_inf loss

L_2 Model | 0.02041044688464786 | 0.020456250711245783 | 0.026553992242393767

L_1 Model | 0.16101776823280192 | 0.16086314626903786 | 0.18451582220849053

L_inf Model | 161.01776823280193 | 160.86314626903786 | 184.51582220849053

1e)
```

What I seen in the tables is that I realized that the difference in the training and test losses tables are that the test table have more larger values than in the training table. This is because in the test table we are generating a lot more test data points which causes our model to be more accurate. Also, in the L_inf model, the values are higher than in the other models. It is because L_inf norm is going off the maximum value, making it more normal for it to be high. It is influence by the magnitude of the highest value, so outliers very easily cause it to diverge.

2d)

```
Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1.5887073208488474 | 1 | 9.685454059110057e+110 | 0.1 | -8.544383053831851e+104

50 | 6.681187863472287e+78 | 2 | 8.264222796482778e+103 | 1.0 | 2.710698337871812e+209

100 | 1.3264423843113885e+108 | 4 | 1.399214959758374e+108 | 10.0 | nan

200 | 9.257088690786201e+145 | 8 | -1.115438668225958e+103 | 100.0 | nan
```

```
Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |3.5398926683963936e+210 | 1 |3.874201127686805e+217 | 0.1 |-2.3995542115574723e+214

50 |-6.092265290698519e+211 | 2 |2.4318346396293315e+214 | 1.0 | nan

100 |6.531618010146513e+210 | 4 |1.052244909446209e+211 | 10.0 | nan

200 |7.849208802619096e+218 | 8 |-2.7914629345974663e+208 | 100.0 | nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-3318337365.0413804 | 1 |3.166171798797541e+108 | 0.1 |4.508780977663195e+109

50 |2.7797360116551276e+77 | 2 |3.607196350170701e+113 | 1.0 |1.3575235219470153e+204

100 |-7.336865284021071e+107 | 4 |-7.02001164203185e+104 | 10.0 |7.71688856270352e+305

200 |-5.48717545945836e+141 | 8 |1.8614665094700543e+106 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |3.980400111873265e+210 | 1 |-1.2355647798273682e+221 | 0.1 |2.5293258269495735e+214

50 |2.366454113395718e+211 | 2 |5.505183994251537e+213 | 1.0 |nan

100 |9.808201183776644e+213 | 4 |1.2861791272388231e+211 | 10.0 |nan

200 |4.936166010965149e+218 | 8 |-2.4592667474051196e+208 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2893601962.2312965 | 1 |1.1794132549973481e+111 | 0.1 |2.2901452273076475e+113

50 |-3.705764488902992e+85 | 2 |-7.795352480019006e+110 | 1.0 |1.1571776433939313e+205

100 |-5.3891732936010125e+107 | 4 |-1.0515009578453442e+108 | 10.0 | nan

200 |-8.980355782685844e+136 | 8 |1.7423283717480669e+109 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-1.0171551261277492e+208 | 1 |2.9305768985817667e+217 | 0.1 |1.1961328084877877e+213

50 |6.375877122642293e+211 | 2 |3.68075236621739e+213 | 1.0 |nan

100 |5.797072998795849e+212 | 4 |-1.2187543236836965e+212 | 10.0 |nan

200 |3.707405660964195e+218 | 8 |-1.6506216795273347e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 107392.49930268108 | 1 | 2.023251110142703e+114 | 0.1 | -3.0315126380895086e+111
- 50 |8.038428206286163e+76 | 2 |1.9257604389927175e+110 | 1.0 |-1.929502896009264e+213
- 100 | 3.6429957695797507e+108 | 4 | 1.3828508737098547e+107 | 10.0 | nan
- 200 |-1.2886023254284662e+135 | 8 | 1.3486832206866585e+106 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |-2.0864123594224526e+209 | 1 |5.923967675270361e+218 | 0.1 |-2.647238793252183e+214
- 50 | 9.214106087317534e+211 | 2 | 2.8130425159078393e+215 | 1.0 | nan
- 100 |-3.0975112776816678e+212 | 4 |1.6044731437039901e+211 | 10.0 |nan
- 200 |3.8370717189394284e+216 | 8 |3.198155354712311e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 0.8806395024314195 | 1 | 5.62337913758968e+114 | 0.1 | | 3.451683832318016e+103
- 50 |1.1263503627056595e+82 | 2 |-2.572769313820822e+110 | 1.0 | 7.052244394804065e+214
- 100 | 1.206663493917033e+116 | 4 | -3.9728119054783846e+100 | 10.0 | 2.820695859868985e+307
- 200 |-1.9418084651194348e+142 | 8 | 3.535002289781789e+106 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-7.849990509766216e+208 | 1 |-2.6863715107312336e+219 | 0.1 |5.285532934298051e+214
50 |-1.5137229109368103e+211 | 2 |-3.768247995947978e+215 | 1.0 | nan
100 | 1.4880774603231338e+212 | 4 | 2.650023365220947e+210 | 10.0 | nan
200 |2.2801852272284108e+216 | 8 |3.4594232544168816e+207 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |7169186344.458417 | 1 |8.648674473840346e+112 | 0.1 |4.121593375930555e+107
50 | 1.8406326897815568e+86 | 2 | -5.136207851112755e+109 | 1.0 | 2.2931719964554517e+210
100 |3.0911635444732773e+114 | 4 |7.732866276359234e+100 | 10.0 |nan
200 | 7.360918496594647e+141 | 8 | 1.8549240146478945e+104 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-7.265877925408103e+207 | 1 |1.5448797152692444e+220 | 0.1 |2.958408790538185e+215
50 |8.854418333435177e+211 | 2 |1.6531413354282244e+213 | 1.0 |nan
100 |1.1871220490486944e+215 | 4 |2.790184303947682e+211 | 10.0 |nan
200 |1.7962305817881252e+220 | 8 |7.346571867308058e+208 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 16831699355387.305 | 1 | 2.1904248402060403e+115 | 0.1 | 1.1644055635502312e+108
50 | 3.6603538849979154e+76 | 2 | -1.6624087513223502e+110 | 1.0 | 9.70667384054138e+202
100 |1.3330069335761428e+107 | 4 |3.115565636912145e+107 | 10.0 |nan
200 | 7.69222027054193e+141 | 8 | -5.2427165324156814e+104 | 100.0 | nan
```

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

```
10 |1.051046737928901e+211 | 1 |4.9065539887242374e+219 | 0.1 |-1.653656851678039e+213
```

- 50 |-5.654124985922029e+210 | 2 | 7.350139682038665e+211 | 1.0 | nan
- 100 |-1.4863750228315118e+214 | 4 |5.1191269277506893e+210 | 10.0 | nan
- 200 |-2.389906198734426e+218 | 8 |-4.4050371417359185e+208 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 |604311584.5062443 | 1 |4.765646026329451e+108 | 0.1 |1.6342563739725154e+113
- 50 | 1.4002301159201677e+79 | 2 | 1.74064274492961e+107 | 1.0 | 7.290943358391204e+206
- 100 |5.263067743185593e+102 | 4 |6.070961962595482e+109 | 10.0 |nan
- 200 |2.7991295952958515e+139 | 8 |-8.091620930121673e+101 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 9.11299713820462e+210 | 1 | 3.128123255128227e+216 | 0.1 | -6.016825260606337e+213
- 50 |-1.5177524259339362e+212 | 2 |1.0302360944691367e+216 | 1.0 | nan
- 100 |-7.262099196146719e+213 | 4 | 9.751703706378137e+210 | 10.0 | nan
- 200 |-9.134196693946885e+218 | 8 |-4.851825641379698e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |1.9213669396576416 | 1 |1.0889921853777e+109 | 0.1 |4.193558815286653e+111
- 50 |-3.797729510521591e+78 | 2 |4.152797683150825e+109 | 1.0 |1.222285595272223e+209
- 100 |1.9350171191799553e+103 | 4 |2.0626817998779343e+104 | 10.0 |8.775151258826349e+304
- 200 |-1.297090743320634e+147 | 8 |-6.915344458132493e+101 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.9345517841500225e+208 | 1 |4.024223352144386e+218 | 0.1 |8.675006463806541e+213

```
50 |3.1838202208019717e+211 | 2 |2.9888995951769885e+214 | 1.0 | nan
100 |8.402143598777942e+212 | 4 |6.853861329494663e+209 | 10.0 | nan
200 |7.989022062043416e+215 | 8 |6.107049126319675e+207 | 100.0 | nan
```

Table: Training accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 |-1.2158129084230158e+37 | 1 |-1.4588951973536691e+121 | 0.1 | 2.713803304589833e+109
- 50 |-9.503662539638893e+75 | 2 |9.279016782561824e+113 | 1.0 |1.5040388982981859e+208
- 100 |1.586212234542708e+106 | 4 |3.7236351656455037e+105 | 10.0 |nan
- 200 |1.361740270081602e+144 | 8 |1.0967412564621194e+103 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 | 1.4570704920739101e+209 | 1 | 2.307302537484164e+217 | 0.1 | -1.2564702067557648e+215
- 50 |1.284207519250175e+211 | 2 |5.3535119797824e+213 | 1.0 |nan
- 100 | 6.735949987892597e+213 | 4 | -3.378422757447662e+210 | 10.0 | nan
- 200 |3.231816463011576e+218 | 8 |3.4776581412881606e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 |369.30154935034744 | 1 |2.2929618409431954e+114 | 0.1 |-6.8678779097729604e+112
- 50 |-1.4600620926110207e+90 | 2 |3.2441951084455915e+112 | 1.0 |6.0218615505159605e+208
- 100 | 4.056319748890233e+113 | 4 | -4.91576298143231e+110 | 10.0 | 7.128723296597454e+300
- 200 | 7.343582558530846e+136 | 8 | 3.0773573560178103e+103 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |3.0553463482842495e+209 | 1 |5.727152937708778e+217 | 0.1 |7.242680421504799e+211
- 50 | 1.791273588533185e+209 | 2 | 6.698400772240744e+216 | 1.0 | nan

```
100 |2.637888973470054e+214 | 4 |5.362010610364563e+212 | 10.0 |nan
200 |1.0062654705439546e+217 | 8 |4.51422202693039e+206 | 100.0 |nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-6.613615170608433e+16 | 1 |3.636108310071247e+107 | 0.1 |1.3228798845283705e+108

50 |7.825675471999792e+86 | 2 |-7.907676858694154e+111 | 1.0 |1.5717353742435615e+210

100 |-1.0231438174019459e+109 | 4 |1.8902635794979782e+107 | 10.0 |nan

200 |8.673341591101821e+138 | 8 |3.908486745465365e+101 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.7218360130071745e+212 | 1 |1.7486954899078707e+217 | 0.1 |9.130514752784957e+215

50 |1.109247365412263e+208 | 2 |5.675071366886216e+214 | 1.0 |nan

100 |2.7405801781388564e+212 | 4 |-2.857043007404294e+210 | 10.0 |nan

200 |2.2322209828721466e+219 | 8 |5.834405576790464e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |93765.50874636958 | 1 |5.591623561240852e+115 | 0.1 |1.8665036772152743e+108

50 |5.474092890215978e+81 | 2 |4.1953167007143043e+104 | 1.0 |-8.54754834614123e+214

100 |1.6940933148244257e+113 | 4 |2.7943629163097755e+112 | 10.0

|1.0269811510907708e+307

200 |4.8134180108812044e+138 | 8 |5.5632919507235984e+101 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |4.162054515785872e+207 | 1 |-1.0107209325887732e+220 | 0.1 |-1.551240971677313e+213

50 |-2.440739320815385e+212 | 2 |-4.3275515220302434e+212 | 1.0 | nan

```
100 |1.0214416791741383e+214 | 4 |1.1218162332069701e+209 | 10.0 |nan
200 |2.8478759007582135e+218 | 8 |1.0217709028623184e+207 | 100.0 |nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |281053.6892717875 | 1 |5.645626436971277e+111 | 0.1 |5.918078726822386e+112

50 |-4.4842570911100263e+73 | 2 |5.320968802608037e+108 | 1.0 |4.789168087923847e+205

100 |9.845635966644243e+104 | 4 |2.931309934417528e+110 | 10.0 |nan

200 |6.777737240847135e+139 | 8 |7.006271666891828e+100 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-6.550946717218225e+210 | 1 |6.42093691031691e+217 | 0.1 |-2.0928712242286923e+214

50 |-1.0127742946069809e+211 | 2 |2.54630935660651e+213 | 1.0 | nan

100 |1.4886830392030376e+212 | 4 |-3.524732988256185e+209 | 10.0 | nan

200 |3.269008876202718e+218 | 8 |3.416337185103225e+208 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-1.7411448468616157e+26 | 1 |7.788495751752272e+110 | 0.1 |1.3477699699231438e+118

50 |-6.602253990349314e+74 | 2 |-1.536240861339966e+108 | 1.0 |2.332964714724819e+202

100 |-1.0359795721416109e+111 | 4 |1.0374121538805898e+104 | 10.0 | nan

200 |1.464593455754941e+138 | 8 |1.1150805981974087e+104 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.022360393823991e+209 | 1 |9.78054272589155e+216 | 0.1 |-2.764253585313786e+214

50 |2.063383113331989e+212 | 2 |7.468935963226194e+214 | 1.0 |nan

100 |3.5350446318700576e+214 | 4 |5.033577207129591e+210 | 10.0 |nan

```
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |4.2232543210113676e+21 | 1 |1.315384268233333e+108 | 0.1 |6.544747501168845e+110
50 | 2.6580852886768416e+79 | 2 | -4.674470909301346e+110 | 1.0 | -2.693747753752943e+201
100 |-3.1838828096894275e+109 | 4 |-6.873449921082053e+104 | 10.0 |9.285412314020703e+306
200 |1.32032147034131e+139 | 8 |9.844447608996356e+101 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-1.35836562407335e+210 | 1 |1.1177644950917274e+219 | 0.1 |-8.436808598920422e+213
50 |1.5945489511751028e+213 | 2 |4.365942154149638e+214 | 1.0 | nan
100 |-1.1184438914754177e+216 | 4 |3.558188179927858e+211 | 10.0 |nan
200 |-3.8687146062733124e+218 | 8 | 8.92796504347209e+207 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |6.004562332051188e+19 | 1 |1.5492059244547805e+117 | 0.1 |1.806185734240266e+109
50 |-1.0661866672818016e+82 | 2 | 1.696698562084778e+108 | 1.0 | 1.1410016201781382e+214
100 | 5.005379384186941e+110 | 4 | 2.284474418146504e+104 | 10.0 | 5.946013130444508e+300
200 |9.480757368791391e+137 | 8 |-2.426680625277647e+104 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-6.330147690445354e+207 | 1 |6.460173730482653e+216 | 0.1 |6.565702858109736e+212

50 |1.1959313927514087e+210 | 2 |-2.6805803206344567e+214 | 1.0 | nan

100 |-9.877670791508315e+213 | 4 |6.233657905821862e+209 | 10.0 | nan

200 |1.8390672640608714e+219 | 8 |8.407436719003657e+207 | 100.0 | nan

```
Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 4.463864438462133e+17 | 1 | -2.2994293350976792e+115 | 0.1 | 2.0602014693139175e+110

50 | 2.4518736071830122e+73 | 2 | 3.611264330407994e+104 | 1.0 | -7.183071168454619e+207

100 | 5.1043433579896994e+109 | 4 | 4.846879378229176e+109 | 10.0 | nan

200 | 3.4774105543266276e+139 | 8 | 5.7709329019467184e+103 | 100.0 | nan
```

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 | 2.184400423183505e+210 | 1 | -1.400069004604957e+217 | 0.1 | 2.2731287880053356e+212
- 50 | 2.978914066261042e+211 | 2 | 1.279711897554009e+213 | 1.0 | nan
- 100 | 2.8838329380073256e+213 | 4 | 5.690180558628837e+210 | 10.0 | nan
- 200 | 9.987767146048197e+216 | 8 | 1.3741338388989592e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 |5.416661291547309e+28 | 1 |-4.4562476857954064e+108 | 0.1 |-1.3841717747749747e+108
- 50 | 3.0397970749549805e+72 | 2 | 1.1147903772147834e+112 | 1.0 | -9.426090419059176e+207
- 100 | 2.7178090530671017e+104 | 4 | -2.5521788178587846e+102 | 10.0 | nan
- 200 | 7.567472162832822e+135 | 8 | 2.24479689231959e+104 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 | 1.7696698816820767e+210 | 1 | 2.1409649595058696e+221 | 0.1 | 1.6940814763926445e+214
- 50 |1.8449120432180036e+211 | 2 |7.8992811982243e+212 | 1.0 |nan
- 100 |-5.137600112268776e+214 | 4 |-2.7808718341841046e+210 | 10.0 | nan
- 200 |5.19271968526884e+219 | 8 |-1.6817045450857308e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.3081517575880001e+21 | 1 |1.275832215457325e+117 | 0.1 |4.486809063271805e+112

50 |6.904284166852322e+74 | 2 |3.9912626719178105e+107 | 1.0 |-1.4110303430508433e+208

100 |-8.495042357197093e+104 | 4 |6.748545228130605e+101 | 10.0 |3.621219300988426e+302

200 |-1.4553813962741192e+145 | 8 |4.223424900655802e+103 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 6.299122428670017e+210 | 1 | 4.444501808544312e+218 | 0.1 | 3.05906638616829e+213
- 50 |-8.40725265096572e+212 | 2 | 9.875077764774303e+213 | 1.0 | nan
- 100 |-1.960400108375862e+213 | 4 |-9.045174176831048e+210 | 10.0 | nan
- 200 | 2.787960328457965e+218 | 8 | -2.93964519595011e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |5.971280466861903e+16 | 1 |-9.543520662744071e+114 | 0.1 |-1.1904511180946586e+112
- 50 |-9.065774877191779e+80 | 2 |4.3954484618606835e+108 | 1.0 |3.122511258791159e+208
- 100 | 2.6111564744706916e+110 | 4 | 3.7050434737996586e+105 | 10.0 | -inf
- 200 |8.419788350625676e+140 | 8 |1.664052932136176e+107 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |6.5545010985415465e+209 | 1 |3.887616770139285e+219 | 0.1 |7.108531614400062e+212
- 50 | 3.84468874402702e+209 | 2 | 2.0601701668113042e+215 | 1.0 | nan
- 100 |3.5125150936876847e+214 | 4 | 7.457275969545165e+210 | 10.0 | nan
- 200 |-1.444508139570283e+218 | 8 | 1.6144107817204119e+208 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |96080953602771.42 | 1 |-2.8856252522796293e+111 | 0.1 |7.976899098554747e+105
50 | 2.901886840459323e+80 | 2 | -2.0954035273116273e+111 | 1.0 | 2.6022679607400807e+211
100 |-3.6422325320145064e+109 | 4 | 4.2034436203032323e+107 | 10.0 | nan
200 |-4.9125478066632345e+144 | 8 |3.89851294694231e+103 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |1.1643058351439338e+208 | 1 |3.27699898110098e+220 | 0.1 |9.513158949294682e+213
50 | 7.822256053476066e+210 | 2 | -6.139011785140284e+213 | 1.0 | nan
100 | 7.356531409251062e+211 | 4 | -1.7311281442287552e+211 | 10.0 | nan
200 | 1.8655079973969728e+215 | 8 | 1.0196648554552669e+208 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 1.0806436752361614 | 1 | -8.783773344799516e+122 | 0.1 | -4.727471646490108e+110
50 |2.55455457682823e+66 | 2 |1.9571558329299465e+109 | 1.0 |1.019694057727286e+209
100 |2.7954559472035576e+109 | 4 |6.864728302997345e+111 | 10.0 |nan
200 |-1.3331856187153733e+138 | 8 | 1.7382459192618727e+101 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-5.952485158625767e+210 | 1 |3.0989980890835124e+216 | 0.1 |1.1396236682174333e+215
50 | 6.551282890587061e+210 | 2 | 4.9603728214339904e+213 | 1.0 | nan
100 |1.7812736837398793e+211 | 4 |5.437571887476225e+210 | 10.0 |nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

200 |1.742712999849798e+218 | 8 |-8.099783088221839e+208 | 100.0 |nan

```
10 | 2.4581409727839834 | 1 | -9.870213524123831e+116 | 0.1 | 6.090673579694257e+103
```

- 50 | 3.5664453137457625e+82 | 2 | -3.8932616089332465e+110 | 1.0 | 8.41569374725559e+212
- 100 | 4.0412462465080466e+101 | 4 | -6.130105602839589e+111 | 10.0 | nan
- 200 |-3.0486514375963774e+139 | 8 |-6.91580643173801e+101 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 |1.5033872084565555e+207 | 1 |8.25132061536061e+219 | 0.1 |1.0086416038793612e+214
- 50 |1.1835781469004135e+213 | 2 |-1.0829870080328593e+215 | 1.0 | nan
- 100 | 2.4825890211018316e+213 | 4 | -1.1504021284198792e+211 | 10.0 | nan
- 200 |-6.850262523910636e+217 | 8 |-1.255738453676547e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |1.0459879347748593e+22 | 1 |-1.5548132173685076e+114 | 0.1 |9.411760834298559e+111
- 50 |-1.1667229186183717e+75 | 2 | 5.8626950103773e+104 | 1.0 | 3.227889899749799e+210
- 100 |-4.2675632120937486e+111 | 4 |6.505450535225832e+103 | 10.0 |nan
- 200 |1.715028982321362e+141 | 8 |1.8900052182594408e+106 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |1.0302270320230998e+208 | 1 |-1.6648972911765418e+218 | 0.1 |1.3022526295677732e+215
- 50 | 6.908723272189485e+212 | 2 | 1.869094607488309e+213 | 1.0 | nan
- 100 | 6.488620472178913e+215 | 4 | 4.218356271187507e+208 | 10.0 | nan
- 200 |1.8236235160360646e+218 | 8 |4.9096400734993924e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 0.8259596472464922 | 1 | 4.5534017994871324e+113 | 0.1 | 1.3983922416533835e+109

```
50 |-8.713205564404602e+79 | 2 |6.185154945556519e+112 | 1.0 |-1.0480319111748471e+212

100 |-1.2317504409596497e+114 | 4 |5.717568339582999e+106 | 10.0 |nan

200 |1.9453838789681044e+140 | 8 |-1.4211414275318612e+109 | 100.0 |nan
```

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |3.0131470611271984e+210 | 1 |2.069218695638281e+216 | 0.1 |-4.0455971660564436e+213

50 |2.3351190451570568e+212 | 2 |1.9148447677438194e+215 | 1.0 | nan

200 |-7.256395786793258e+216 | 8 |3.0330009375994767e+207 | 100.0 |nan

100 | 7.781092152893194e+215 | 4 | 1.779746920696795e+210 | 10.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.214714684759575e+16 | 1 |-5.8879080865327996e+109 | 0.1 |1.1237494793981428e+113

50 |9.516434292321881e+75 | 2 |2.0619736235817875e+107 | 1.0 |2.1050079409442934e+212

100 |3.2558651269199755e+111 | 4 |6.088694433609547e+107 | 10.0 |nan

200 |-2.3238514268134593e+134 | 8 |-4.995020601090372e+102 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1.0358586633536702e+209 | 1 | 1.4167257896385341e+217 | 0.1 | -1.0011127949007629e+215

50 | -9.513553600448536e+211 | 2 | 1.9155759774702817e+214 | 1.0 | nan

100 | 5.559195479774964e+212 | 4 | 2.4907181092959023e+209 | 10.0 | nan

200 | 4.250045475640002e+218 | 8 | 2.9997499179664157e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 0.5298605665065259 | 1 | 3.8867896088192975e+106 | 0.1 | -1.3648512417160558e+108

50 | -4.480361267793741e+82 | 2 | 1.8913344803195262e+110 | 1.0 | 2.5206626072607245e+204

```
100 |1.943403859583451e+109 | 4 |1.9966069607499632e+101 | 10.0 |-inf
200 |9.812805474188259e+130 | 8 |5.197402083305349e+101 | 100.0 |nan
```

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2.100028656327172e+210 | 1 |1.4534942347165304e+219 | 0.1 |1.6027074417925677e+214

50 |6.556374842958114e+211 | 2 |-2.311957127250301e+213 | 1.0 | nan

100 |-5.55502602983419e+214 | 4 |-9.858502031273959e+209 | 10.0 | nan

200 |1.4128438571884584e+217 | 8 |-2.9005651626283476e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 6.662633180153943 | 1 | 1.5643986099997502e+111 | 0.1 | 6.457176337833762e+113

50 | 3.7966841985424504e+87 | 2 | 3.1053309474634935e+117 | 1.0 | 2.9913855649715425e+210

100 | 2.6003066205814703e+114 | 4 | -1.6626171325241104e+102 | 10.0 | nan

200 | 9.41027285331256e+136 | 8 | 4.070427230184081e+101 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 7.259757060088334e+210 | 1 | 1.4802657539753507e+218 | 0.1 | 3.308143747502485e+213

50 | 1.0147457753309175e+211 | 2 | 2.0066948410929748e+216 | 1.0 | nan

100 | 6.523961095487844e+212 | 4 | 2.2957881249161795e+209 | 10.0 | nan

200 | 2.5123868638113626e+219 | 8 | 3.0478910452528077e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |14777339353034.037 | 1 |7.984475886084914e+118 | 0.1 |-1.8338244511068686e+111

50 |-1.661088823243705e+82 | 2 |5.945680638679516e+108 | 1.0 |1.0989444483257659e+212

100 |2.0921796112122514e+109 | 4 |1.79510381198169e+110 | 10.0 |2.761577293065664e+304

```
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |2.7940645649589543e+210 | 1 |-5.763730418765131e+218 | 0.1 |8.400751404760248e+212
50 | 2.92053683157505e+210 | 2 | -5.046987558929888e+214 | 1.0 | nan
100 | 2.460141049044527e+211 | 4 | -7.867348303133868e+209 | 10.0 | nan
200 |-1.829395452311602e+218 | 8 |-3.230658074339598e+207 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 4.956376263776349e+18 | 1 | 1.3856175511780997e+118 | 0.1 | 1.7666137086109734e+114
50 | 8.604947546469333e+81 | 2 | 8.341936260544356e+114 | 1.0 | 8.556716997032355e+200
100 |3.234801967759543e+109 | 4 |-1.3485171869742768e+112 | 10.0 |-inf
200 |2.0939370194680003e+137 | 8 |1.4336318594252256e+109 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |8.925692878064917e+208 | 1 |-1.5512516441360568e+219 | 0.1 |3.686705957043992e+212
50 | 1.2768500492375363e+211 | 2 | 1.893513664323486e+213 | 1.0 | nan
100 |-2.304426762908139e+216 | 4 | 7.378270356673428e+208 | 10.0 | nan
200 |8.167298458565111e+215 | 8 |-3.227834958101882e+206 | 100.0 |nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 5.650858542839681e+23 | 1 | 3.762205995187919e+120 | 0.1 | 1.1971213446620274e+111

50 | -2.1562800183344038e+80 | 2 | -7.929072180030249e+110 | 1.0 | -4.906439171809778e+211

100 | 1.5265774901467426e+109 | 4 | 1.2676938606075887e+103 | 10.0 | nan

200 | -5.296383296434461e+139 | 8 | 1.4908210646109467e+104 | 100.0 | nan

```
Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 7.60272182295116e+210 | 1 | 1.9810494353465441e+217 | 0.1 | 4.8056895195447226e+212

50 | -1.3822118698567983e+213 | 2 | 2.0199626222091002e+214 | 1.0 | nan

100 | 6.499077882141983e+213 | 4 | -1.5342239845161313e+209 | 10.0 | nan

200 | 9.465902912931629e+216 | 8 | 1.2631969162804098e+209 | 100.0 | nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |94540455138.14452 | 1 |3.990809601983324e+110 | 0.1 |2.3626418233662927e+111

50 |2.385658605593896e+64 | 2 |5.3669843316774415e+107 | 1.0 |-1.0569009165393628e+213

100 |9.289198296131137e+112 | 4 |5.5231773750855316e+107 | 10.0 |5.155779208331805e+305

200 |-1.6985438906292428e+142 | 8 |-2.287072734314766e+102 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |3.013310526161607e+210 | 1 |2.1882116046069156e+218 | 0.1 |1.402639473306714e+214

50 |-1.9753735983216157e+210 | 2 |5.933572358107158e+213 | 1.0 | nan

100 |5.886974536849354e+213 | 4 |2.9580302718667746e+209 | 10.0 | nan

200 |3.2108748485629163e+217 | 8 |-6.64911769775409e+206 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-1.1379491888280188e+25 | 1 |2.9575248074270634e+111 | 0.1 |-1.263520342437962e+103

50 |-1.5360689910627052e+85 | 2 |6.969904243676614e+107 | 1.0 |1.411142907358768e+212

100 |6.164272278343707e+99 | 4 |2.202784322765544e+106 | 10.0 |-inf

200 |9.083093618328774e+144 | 8 |1.4337113698867502e+101 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1.5520125366455845e+207 | 1 | 2.7879749322479744e+218 | 0.1 | -5.67096791370079e+216

50 | 6.1462383132689275e+211 | 2 | -1.3341993839247395e+215 | 1.0 | nan

100 | 9.536395437322947e+212 | 4 | 3.015841742507014e+208 | 10.0 | nan

200 | 6.69664165355444e+216 | 8 | 1.9389420812491805e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 2.245003165499533e+25 | 1 | 1.85495101352403e+116 | 0.1 | 2.6054799809805314e+111
- 50 |9.727060304473276e+83 | 2 |1.43965562806216e+109 | 1.0 |6.265920217966832e+221
- 100 | 3.5945815875546006e+107 | 4 | 6.422081316727344e+106 | 10.0 | 2.5882677228478615e+307
- 200 | 2.7773689153180224e+140 | 8 | 2.1677771452637387e+101 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |-5.6422820555021865e+212 | 1 |2.994491022849056e+219 | 0.1 |-5.36717763856509e+214
- 50 |-9.329977478923965e+212 | 2 | 6.20461510583578e+213 | 1.0 | nan
- 100 |-7.330506309272866e+214 | 4 | 6.866338962836471e+210 | 10.0 | nan
- 200 |-3.6593460360178753e+217 | 8 |4.283197043464501e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |0.12636518665254334 | 1 |8.852747961560105e+114 | 0.1 |4.221943366066231e+112
- 50 | 6.229184251057646e+79 | 2 | 7.541935258546174e+111 | 1.0 | 6.567363458679411e+207
- 100 |-1.258426504235913e+111 | 4 | 1.849979864933637e+103 | 10.0 | nan
- 200 | 4.562412524471502e+141 | 8 | 2.8228765775660424e+102 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |1.1655427228237805e+211 | 1 |2.8272527684251735e+220 | 0.1 |2.5202120484726854e+215
50 | 3.017745944090743e+211 | 2 | -3.2538531239803553e+212 | 1.0 | | nan
100 |1.0841518502644878e+215 | 4 |1.4027753180293044e+209 | 10.0 |nan
200 |8.24086862876778e+217 | 8 |2.879479332593709e+207 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |6.559892665127857e+16 | 1 |-9.178663352516927e+123 | 0.1 |9.705325848109949e+113
50 | 9.55090976858361e+77 | 2 | 4.83027109463331e+106 | 1.0 | 1.6986425968003927e+208
100 | 7.88948883450899e+115 | 4 | 6.475851306669798e+108 | 10.0 | nan
200 |1.227992103998095e+139 | 8 |1.8927202861086152e+107 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-3.5762966436168394e+209 | 1 |2.0216002721131936e+217 | 0.1 |5.329515757552972e+216
50 | 4.194302535606083e+212 | 2 | 1.0204329044534335e+215 | 1.0 | nan
100 | 5.640798122739543e+214 | 4 | 7.721657177208923e+209 | 10.0 | nan
200 |-6.375662538109223e+218 | 8 | 2.4185981334012324e+208 | 100.0 | nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 949089807705.9165 | 1 | 4.4717493414878845e+110 | 0.1 | 5.682724967297716e+111

50 | -5.1546513355397026e+85 | 2 | 1.2447883037936401e+104 | 1.0 | -1.0915855715788622e+208

100 | 6.285172872652486e+112 | 4 | 4.280948765013741e+106 | 10.0 | -inf

200 | -1.512136401049104e+143 | 8 | 1.6302396712210776e+104 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

```
10 |-6.702967975526717e+207 | 1 |1.2162328586057143e+219 | 0.1 |1.6753738530557166e+213
```

- 50 | 4.985041132020246e+212 | 2 | -6.746568243276345e+213 | 1.0 | nan
- 100 |-1.139763919652464e+214 | 4 |-1.19003640625925e+211 | 10.0 | nan
- 200 | 2.616481073811317e+216 | 8 | -8.622683030967093e+206 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |-3.252162904997476e+20 | 1 |5.244879057491058e+108 | 0.1 |1.289726121068709e+106
- 50 | 6.973548007551732e+83 | 2 | -2.132092806304701e+109 | 1.0 | -4.7744922010413295e+203
- 100 |-1.5358338528299207e+105 | 4 |-8.267831187310923e+103 | 10.0 | nan
- 200 |3.1450811264117505e+141 | 8 |6.825512567546038e+104 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 2.851370024130372e+210 | 1 | 1.559504503480341e+217 | 0.1 | 1.365005035255471e+215
- 50 | 8.41196531727669e+213 | 2 | 7.246092183672974e+213 | 1.0 | nan
- 100 | 9.520454129532132e+211 | 4 | 5.29028274693494e+210 | 10.0 | nan
- 200 |-6.447420984141193e+216 | 8 |-3.1847257048697655e+206 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |3613798848523130.5 | 1 |-3.725306032334616e+113 | 0.1 |4.1893313079570827e+105
- 50 | 2.0929902247522256e+78 | 2 | 2.444741682563173e+108 | 1.0 | 1.8206546937585136e+211
- 100 |-6.658568730867329e+108 | 4 |5.208833392264194e+105 | 10.0 |6.066168313889218e+303
- 200 |-5.909759797908521e+142 | 8 | 1.2747639867066503e+103 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |3.764233623645812e+210 | 1 |1.0957276999432635e+218 | 0.1 |1.10903443879857e+216

```
50 | 7.875529202272559e+210 | 2 | -2.4089116664488088e+216 | 1.0 | nan
100 | 1.6254633581988735e+214 | 4 | 7.856039456633101e+210 | 10.0 | nan
200 | 2.585257245483959e+217 | 8 | -2.2371312875637034e+207 | 100.0 | nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 9878248881349338.0 | 1 | 1.5945506581029987e+113 | 0.1 | 3.0033347938243606e+108

50 | 1.27264411488576e+93 | 2 | -1.8250431244395668e+111 | 1.0 | -1.7011451404390948e+210

100 | -1.3311649228189559e+107 | 4 | 2.211987942958182e+106 | 10.0 | nan

200 | 4.672456337200252e+144 | 8 | 2.455953773118838e+104 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.5471009492432492e+211 | 1 |1.1500426816909039e+219 | 0.1 |3.2405979036598316e+211

50 |1.381175582022442e+213 | 2 |1.2841487579820567e+215 | 1.0 |nan

100 |-8.578692995582524e+215 | 4 |-3.871060255574359e+211 | 10.0 |nan

200 |-9.797986266970411e+216 | 8 |-3.9959663118425665e+204 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2.19343022641847e+19 | 1 |1.091353133656954e+126 | 0.1 |1.4759699245250634e+110

50 |-6.314729024204743e+72 | 2 |8.328421037493386e+110 | 1.0 |1.0384640247175158e+208

100 |-6.465453790994439e+105 | 4 |4.415983767175015e+102 | 10.0 |nan

200 |5.801370721063024e+136 | 8 |1.650992666325736e+100 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.75065967994115e+209 | 1 |1.4143726097636114e+217 | 0.1 |-6.031434826018988e+214

50 |7.076956321386588e+208 | 2 |2.5672402671583986e+214 | 1.0 | nan

```
100 |4.7388674479681797e+213 | 4 |1.3236777701111363e+210 | 10.0 |nan
200 |8.498595049160442e+219 | 8 |-6.809253824793349e+205 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |1.2740879972881434e+16 | 1 |3.79498699004196e+113 | 0.1 |-8.363454364710364e+109
50 | 2.0204048048518844e+87 | 2 | 4.679368435767431e+110 | 1.0 | 1.2901204343688433e+213
100 | 4.540046535927828e+106 | 4 | 1.4165284250197474e+104 | 10.0 | nan
200 |4.0701888641683445e+142 | 8 |1.490101497254434e+106 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-2.025450907024407e+209 | 1 |3.3492126034648985e+217 | 0.1 |-4.264668947550336e+214
50 |-1.3890290939622216e+212 | 2 | 3.002087973296729e+214 | 1.0 | nan
100 |1.0476462503617112e+213 | 4 |-7.969868502136216e+208 | 10.0 |nan
200 | 6.531416335514712e+216 | 8 | 7.800924867523963e+207 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 15681282330.15809 | 1 | 1.7624855740669847e+118 | 0.1 | 3.7486953119202526e+108
50 |1.6622772591310773e+76 | 2 |-3.66536188480009e+109 | 1.0 |-1.1921501176492642e+212
100 | 6.93881367307489e+108 | 4 | -2.072941277805008e+112 | 10.0 | nan
200 |6.948003835243768e+140 | 8 |-1.2732017321351674e+110 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

10 |-3.4823656321710892e+208 | 1 |3.7398315007248076e+217 | 0.1 |-

50 | 9.027728422449662e+211 | 2 | 5.394399844292877e+216 | 1.0 | nan

3.2694984491828736e+212

```
100 |-1.8150250716004065e+214 | 4 |1.1171227826967069e+209 | 10.0 |nan
200 |7.767053740129707e+217 | 8 |-2.401094340585271e+208 | 100.0 |nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.490624455186795 | 1 |4.987040572550879e+115 | 0.1 |5.395955869269326e+106

50 |-6.467084922687309e+81 | 2 |6.2132524499291654e+106 | 1.0 |3.176969747860321e+210

100 |1.530526255298016e+105 | 4 |4.56735874164266e+103 | 10.0 |nan

200 |2.5026746812793062e+141 | 8 |8.084409151468766e+101 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1.9808968934252653e+210 | 1 | 1.0995403305563135e+217 | 0.1 | 3.389809543073405e+214

50 | 5.702231083091101e+212 | 2 | 3.665626474745028e+212 | 1.0 | nan

100 |1.4711411332143684e+214 | 4 |4.357697946564616e+211 | 10.0 |nan 200 |6.632791949511248e+217 | 8 |-1.5724581375722287e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |9759023364.763916 | 1 |2.317504152689068e+112 | 0.1 |-1.769132828706467e+108

50 |9.787168878354811e+84 | 2 |1.0221556562911468e+110 | 1.0 |-9.320645032306726e+211

100 |3.7486979117735694e+110 | 4 |-4.8695235339132525e+107 | 10.0

|4.0957246280640686e+304

200 |-1.3225640443793607e+138 | 8 |-7.44068664757278e+103 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.3231535307987037e+209 | 1 |-5.416330606825574e+219 | 0.1 |1.9411684051300887e+213

50 |-6.404257423044086e+211 | 2 |1.9816779197433267e+214 | 1.0 | nan

```
100 | 7.347840923732669e+212 | 4 | -2.0588844264000111e+211 | 10.0 | nan
200 |1.2104880855907883e+217 | 8 |-1.4442556152528681e+208 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |1.6817674285383334e+17 | 1 |1.0748778822433184e+114 | 0.1 |1.8835364936264577e+105
50 | 6.233477703416443e+80 | 2 | 1.0961348584752557e+112 | 1.0 | 2.3659638319645814e+212
100 | 4.290526225116407e+111 | 4 | -1.1255277271465175e+104 | 10.0 | -
1.7087331319389085e+307
200 | 4.708990515103246e+141 | 8 | -1.2641426735079495e+105 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 6.5002900875246825e+209 | 1 | 1.7033769988659139e+214 | 0.1 | -1.9857178906039834e+214
50 | 3.0604808293397125e+209 | 2 | 2.2252000003341774e+215 | 1.0 | nan
100 |-2.825265932187031e+213 | 4 |-4.4996131703389285e+211 | 10.0 | nan
200 |3.3584017863761893e+217 | 8 |1.1982952107670198e+207 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |2.504752613792009e+22 | 1 |3.189173166179953e+111 | 0.1 |5.8543222388129914e+107
50 |4.1187350553884775e+79|2|7.162860857142426e+112|1.0|3.2361544304628853e+201
100 | 7.953089174394209e+107 | 4 | -6.0406361433933225e+106 | 10.0 | nan
200 |-1.83559299046973e+137 | 8 |6.823364020722354e+106 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 4.550547501843048e+209 | 1 | 2.0594190131037292e+219 | 0.1 | -1.3065267312809363e+214
50 | 6.411605588424347e+214 | 2 | 3.461108526964528e+215 | 1.0 | nan
```

```
100 |9.335654277124306e+212 | 4 |2.0955556475721482e+211 | 10.0 |nan
200 |1.118193030873965e+218 | 8 |-1.4079218185275713e+208 | 100.0 |nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |9396396694023.254 | 1 |1.0410319197809215e+110 | 0.1 |1.2799658034559096e+106

50 |2.8757545887374716e+75 | 2 |1.990203490983569e+109 | 1.0 |-1.5422401501428837e+207

100 |9.259556232609803e+112 | 4 |7.633917273526524e+106 | 10.0 |nan

200 |3.963566917559621e+137 | 8 |-8.17945497588391e+107 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2.5318217264049585e+209 | 1 |-1.1821137418369019e+219 | 0.1 |5.433021503308024e+213

50 |1.8705787406100959e+211 | 2 |9.140728811870805e+213 | 1.0 |nan

100 |-3.151708555559506e+213 | 4 |5.443331440432598e+209 | 10.0 |nan

200 |2.2880255505959934e+216 | 8 |-3.978040889168139e+208 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2.7204123959395037e+19 | 1 |2.9518681384661614e+112 | 0.1 |2.5032682435026836e+106

50 |5.3551149102712404e+79 | 2 |-6.813436314625104e+112 | 1.0 |4.994861919470534e+205

100 |3.8220299628129665e+111 | 4 |8.243861542169223e+107 | 10.0 |nan

200 |-8.982810512783562e+140 | 8 |3.6752342197211925e+105 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 4.4528520408058605e+209 | 1 | -5.499956456690793e+218 | 0.1 | -1.4480618116029009e+214

50 | 2.881631545527945e+211 | 2 | 3.257716174599243e+212 | 1.0 | nan

100 | 2.7216792269310283e+213 | 4 | 1.6555223925521058e+209 | 10.0 | nan

```
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-1065095581593.3256 | 1 | 1.0942117007165013e+106 | 0.1 | -1.343414748727026e+112
50 | 6.621698678030423e+71 | 2 | 4.848872911006043e+108 | 1.0 | 2.265086756536901e+204
100 |-5.834912024598974e+108 | 4 | 3.785742276911938e+103 | 10.0 | nan
200 | 6.301626470816987e+137 | 8 | -7.739752779723256e+103 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 1.0950409844151055e+212 | 1 | 6.057832438012426e+217 | 0.1 | 3.558891321926778e+213
50 | 2.1685656869585886e+212 | 2 | 8.199312140650124e+214 | 1.0 | nan
100 |-2.8178383614335007e+215 | 4 | 1.9997824644210318e+209 | 10.0 | nan
200 |1.1790086439349593e+218 | 8 |2.33792350095656e+207 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 7827889050.09373 | 1 | 6.9259965067089045e+109 | 0.1 | 9.718787966869479e+108
50 |-2.2754569734514574e+86 | 2 |-2.4682897026989876e+112 | 1.0 | 2.2408230963225785e+214
100 |-1.1040860463218733e+111 | 4 |-1.11702091612878e+111 | 10.0 | nan
200 |-3.5145879243129904e+144 | 8 |-1.5889385025420004e+102 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-5.207457907311324e+210 | 1 |6.899996611041438e+216 | 0.1 |-4.733627007544547e+213
50 |-1.746623827649505e+212 | 2 |-8.610139016634478e+213 | 1.0 | nan
100 |6.311271976500989e+212 | 4 |-1.0914268618448818e+211 | 10.0 | nan
```

200 |-5.3818048831166985e+218 | 8 | 2.207237222868191e+208 | 100.0 | nan

```
Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 4.256810920242916e+19 | 1 | -6.121234066330069e+112 | 0.1 | -6.563201853837586e+120

50 | 2.573338571740396e+85 | 2 | -1.1453241054597907e+104 | 1.0 | 8.18539078831745e+201

100 | 6.4980326138534e+106 | 4 | 8.631348826986876e+106 | 10.0 | nan

200 | 5.654640788453179e+139 | 8 | 1.192336726198981e+102 | 100.0 | nan
```

```
Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 2.882391509483832e+210 | 1 | 1.8177382556347655e+218 | 0.1 | 4.430451665644911e+213

50 | 2.5071414295037645e+212 | 2 | 4.7165306436001734e+213 | 1.0 | nan

100 | 4.0342960465651544e+212 | 4 | -2.0289613099797282e+210 | 10.0 | nan
```

200 |1.0620108376846074e+217 | 8 |6.754973996882745e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2121581650.2714329 | 1 |-1.1541864054863006e+116 | 0.1 |1.2724184249531955e+112

50 |1.0085787509909746e+82 | 2 |2.2370164089652033e+106 | 1.0 |-2.785820373709816e+216

100 |-5.042811125067139e+111 | 4 |-2.654893909384744e+103 | 10.0 | nan

200 |7.081455747300285e+137 | 8 |-5.423912874285194e+101 | 100.0 | nan

```
Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1.587907020090219e+210 | 1 | -8.704909167498747e+217 | 0.1 | -3.195197237669536e+213

50 | 2.5159908555719062e+212 | 2 | 4.242978541448562e+213 | 1.0 | nan

100 | 2.0004330339812048e+213 | 4 | 1.0664432174120649e+209 | 10.0 | nan

200 | -6.237278198840779e+215 | 8 | 2.3421290772832503e+207 | 100.0 | nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 10.028277503777344 | 1 | 3.140572485535413e+110 | 0.1 | 1.4257138499383032e+114

50 | 7.334945734070441e+85 | 2 | 5.396621779645526e+107 | 1.0 | 2.65685119349575e+210

100 | 1.7678612809638606e+106 | 4 | 3.70611624262352e+104 | 10.0 | nan

200 | 8.460463733926745e+138 | 8 | -1.7122320801180627e+103 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 7.095993965187165e+207 | 1 | -8.50826964496959e+218 | 0.1 | 5.168366521278811e+211
- 50 | 2.3346730964699206e+210 | 2 | -3.0621820636539497e+211 | 1.0 | nan
- 100 |-3.203663807036103e+214 | 4 | 1.9104795819438442e+209 | 10.0 | nan
- 200 | 2.8682084243611317e+218 | 8 | 3.2504951719469544e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |2.1926902637387076e+16 | 1 |-3.086493901366968e+120 | 0.1 |-1.6050287498576632e+112
- 50 |-6.944840574159301e+89 | 2 |2.4493234835768317e+112 | 1.0 | 7.484037371634772e+211
- 100 | 3.3383778522421765e+106 | 4 | -7.649538526394943e+107 | 10.0 | nan
- 200 | 4.6308991290088555e+141 | 8 | 1.2664413216716686e+103 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |-8.82552896970993e+211 | 1 |7.628838514230881e+217 | 0.1 |-4.488896150938129e+214
- 50 |-4.318518870643816e+210 | 2 | 3.3963829122562495e+212 | 1.0 | nan
- 100 | 4.534857332655187e+213 | 4 | 1.551913202889483e+211 | 10.0 | nan
- 200 | 4.1823764795461295e+217 | 8 | -1.1887203391597866e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 7.07152138444167e+26 | 1 | 3.007596190848825e+104 | 0.1 | -8.554808500637436e+108
50 | 7.905556673520751e+84 | 2 | 4.241562731870862e+112 | 1.0 | 1.0226449267477716e+210
100 |1.3175544418910511e+104 | 4 |3.718507125256038e+100 | 10.0 | nan
200 | 7.613743281393662e+142 | 8 | 6.787253242185234e+103 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-1.1821035512273377e+209 | 1 |-4.164551820523059e+221 | 0.1 |5.350302877645293e+212
50 |-6.298701733785658e+210 | 2 | 2.841233729544876e+214 | 1.0 | nan
100 |5.815249507000918e+214 | 4 |2.09412143813611e+210 | 10.0 | nan
200 |5.3428865979215474e+219 | 8 |-1.7681568648013733e+207 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-10056682924891.986 | 1 | 1.0128619105314044e+107 | 0.1 | -1.369868885772458e+108
50 | 1.4793536020191758e+81 | 2 | 3.936168634279598e+106 | 1.0 | -1.5052431038445123e+214
100 |-1.0177662126453206e+117 | 4 | 3.244590363362442e+107 | 10.0 | nan
200 |-2.1589636791315838e+139 | 8 | 2.1013007505753288e+104 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |2.466736139724313e+211 | 1 |-1.3759854912815847e+220 | 0.1 |1.9716066235850896e+215
50 | 6.735181797322247e+211 | 2 | -1.2361764766267937e+215 | 1.0 | | nan
100 | 2.0019869890043705e+214 | 4 | -1.6687035506492015e+210 | 10.0 | nan
200 |-4.127713978649064e+217 | 8 |-1.1662426833059805e+207 | 100.0 | nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

```
10 |1.2093537446184723e+21 | 1 |-1.0982764122812758e+115 | 0.1 |7.081953231807516e+108
```

- 50 | 1.9897915720227497e+81 | 2 | 9.9746121364285e+112 | 1.0 | 5.633664757465649e+210
- 100 | 9.022319707304648e+113 | 4 | 2.5168138816903214e+102 | 10.0 | -inf
- 200 |-1.7807313798898218e+142 | 8 | 6.121645744173871e+104 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 |1.2842563441814205e+209 | 1 |-1.9033368780737115e+217 | 0.1 |7.142146680799863e+214
- 50 |-6.889395263873023e+210 | 2 |-6.859930816088507e+212 | 1.0 | nan
- 100 |8.222816061840974e+211 | 4 |1.5225841383381095e+209 | 10.0 |nan
- 200 | 2.6830356980026526e+217 | 8 | 8.98792289761991e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |-4.277970431671806e+17 | 1 |-1.2649069818368726e+115 | 0.1 | 1.7458208526195822e+105
- 50 | 3.824551997660066e+82 | 2 | -6.0936824678305055e+112 | 1.0 | -1.097437925337643e+211
- 100 | 1.6332362667454773e+112 | 4 | 5.206182624759085e+108 | 10.0 | 3.750333094399853e+300
- 200 |8.074337915559008e+139 | 8 |3.7786285502491755e+102 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |-2.559452158163762e+210 | 1 |1.2849886550985227e+216 | 0.1 |3.002908794245318e+213
- 50 | 7.266163002667783e+211 | 2 | 4.564727421775664e+214 | 1.0 | nan
- 100 |-5.235155854854218e+214 | 4 |-4.2157510367367314e+210 | 10.0 | nan
- 200 | 2.4488378278844283e+215 | 8 | -1.5867537492015035e+206 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |219121051434258.34 | 1 |7.108447436855589e+115 | 0.1 |-1.6697496643079038e+113

```
50 |-3.5711381112550656e+85 | 2 |1.5961401261487713e+110 | 1.0 |5.049091324859215e+210
100 |2.1089025229947636e+103 | 4 |6.998098869468207e+112 | 10.0 |nan
200 |-2.099008091200316e+140 | 8 |-7.000032415671044e+104 | 100.0 |nan
```

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.2322110648430344e+210 | 1 |7.054534702956105e+215 | 0.1 |-6.106780547554879e+215

50 |-2.1039871805960814e+212 | 2 |2.944624501041266e+214 | 1.0 | nan

100 |-8.89785965905056e+212 | 4 |3.6047130924025643e+210 | 10.0 | nan
```

200 |1.485079847523801e+218 | 8 |1.2817364525792155e+206 | 100.0 |nan

```
Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 4.60512348172449e+20 | 1 | -9.349924227581036e+117 | 0.1 | 4.846683782018512e+108

50 | 1.081546965366502e+75 | 2 | 2.3793308566038944e+106 | 1.0 | 1.7977542009521972e+202

100 | -4.630374314002817e+109 | 4 | -5.471578833142131e+108 | 10.0 | 5.834487948375929e+306

200 | 5.2072222646659926e+141 | 8 | -2.371232929766845e+100 | 100.0 | nan
```

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 6.336851397168994e+210 | 1 | 5.718102940516254e+217 | 0.1 | 3.671594683926799e+211

50 | 1.3767394037380424e+211 | 2 | -4.374097402113475e+214 | 1.0 | nan

100 | -3.179965476547389e+216 | 4 | -3.107205674874421e+210 | 10.0 | nan

200 | -3.2185254181566307e+218 | 8 | -2.76234662265948e+209 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2.428053965417113e+25 | 1 |-1.209890400683223e+111 | 0.1 |8.32174825330209e+115

50 |1.0509999476197717e+82 | 2 |-3.123253311776324e+107 | 1.0 |-8.188346727796368e+215

```
100 |-6.812109492019455e+113 | 4 |7.139497483043145e+103 | 10.0 |2.7418992454343806e+302
200 | 4.5336209204848474e+141 | 8 | -2.1492558358941062e+103 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-1.3175456043308853e+213 | 1 |-2.6065719195154722e+219 | 0.1 |-
1.728264645891017e+211
50 |2.0107279432807041e+211 | 2 |2.2272290566377113e+212 | 1.0 | nan
100 |2.0773419163086564e+213 | 4 |-1.753027603508954e+209 | 10.0 | nan
200 |1.2119832466220943e+218 | 8 |-1.7008051539778589e+208 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 12389649617.83265 | 1 | 1.4025227695380196e+113 | 0.1 | 1.7696123196754414e+115
50 | 4.1498573993593456e+86 | 2 | 7.475281944920952e+108 | 1.0 | -8.573231619471374e+215
100 |-1.7554803185443624e+108 | 4 | 8.350532718354252e+100 | 10.0 | nan
200 |6.293886936212287e+138 | 8 |4.0087627114597867e+104 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 6.231248548456369e+210 | 1 | -2.632127792514549e+218 | 0.1 | 9.99909701338298e+215
50 | 1.7619171066965422e+212 | 2 | 7.847051077806931e+213 | 1.0 | | nan
100 | 1.487777160112981e+214 | 4 | -8.072247933807115e+209 | 10.0 | nan
200 |-1.4672369592599676e+219 | 8 |2.4547313985152095e+208 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 1.05947172376922e+19 | 1 | 1.032885857729942e+115 | 0.1 | -4.1986119883369146e+102
50 |-1.5966385271887558e+82 | 2 |1.7643048733448788e+112 | 1.0 | 2.4185988827858228e+213
```

```
100 |-3.750498422625589e+111 | 4 |2.3457395126918134e+104 | 10.0 |nan
200 |9.904406196102862e+138 | 8 |-4.71929971979729e+105 | 100.0 |nan
```

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.9242712169667037e+210 | 1 |-4.2941664502506527e+220 | 0.1 |8.407362127311171e+212

50 |-5.957401041240883e+210 | 2 |-3.725778597468803e+216 | 1.0 |nan

100 |1.952421514549935e+214 | 4 |-3.329494463683729e+209 | 10.0 |nan

200 |9.490714159478682e+217 | 8 |-1.8380389885595267e+205 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.7728822330702636e+18 | 1 |9.715840551501112e+115 | 0.1 |1.5980415558279862e+115

50 |3.2123755810714718e+84 | 2 |-1.1153500597057759e+108 | 1.0 |8.327458651916776e+210

100 |3.9252622998387306e+110 | 4 |5.584276485739044e+102 | 10.0 |-inf

200 |-2.0616352008182664e+138 | 8 |-3.019197410169204e+102 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.6656464668521965e+211 | 1 |-8.968025775766336e+217 | 0.1 |-7.689938992029065e+213

50 |8.548575290507933e+209 | 2 |6.054744010102108e+211 | 1.0 |nan

100 |4.9268666974333405e+212 | 4 |3.948658293019738e+209 | 10.0 |nan

200 |8.457675980098504e+215 | 8 |4.370907910530119e+208 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 124.6068749358352 | 1 | 2.1461557087641585e+118 | 0.1 | 8.26704254353695e+109

50 | 1.7486949682926112e+85 | 2 | -9.416347688213537e+109 | 1.0 | 1.0981414995558826e+204

100 | 4.2160465333667e+112 | 4 | 3.5169896692774426e+109 | 10.0 | nan

```
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 3.8595947700922696e+209 | 1 | 4.0984677816874886e+221 | 0.1 | -9.774745532242525e+215
50 |-1.6589351313813022e+211 | 2 |-2.795532992727941e+213 | 1.0 | nan
100 |1.1130285232184933e+213 | 4 |-1.0873364061917808e+209 | 10.0 | nan
200 |-3.211977656807966e+217 | 8 | 1.6785504705763092e+207 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |586.0014258582762 | 1 |-2.275598633390972e+113 | 0.1 |2.7902525998978364e+107
50 | 3.9963144567517174e+92 | 2 | -7.188124381747037e+111 | 1.0 | -7.522206857924125e+209
100 | 7.494042174905312e+108 | 4 | -3.863669682784224e+109 | 10.0 | nan
200 |1.4593235803886291e+138 | 8 | -4.0004429225096704e+102 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |2.9405540440733067e+207 | 1 |1.2442571789988925e+218 | 0.1 |2.4264310229684528e+213
50 | 1.1799248011847854e+212 | 2 | 3.28197048698552e+214 | 1.0 | nan
100 |-4.382004810266824e+214 | 4 | 5.679031096861521e+211 | 10.0 | nan
200 |8.025685810831244e+216 | 8 |4.545122221804089e+206 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
```

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1586312300.8341682 | 1 | 2.48524154948518e+114 | 0.1 | -8.613287731540227e+118

50 | -3.528462156663725e+78 | 2 | 1.2700080311616126e+106 | 1.0 | -2.372626959404846e+211

100 | 1.918931739387602e+106 | 4 | 4.837107877148766e+102 | 10.0 | nan

200 | 7.171272302438429e+136 | 8 | 4.8774820038862314e+101 | 100.0 | nan

```
Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1.0037655470356235e+211 | 1 | 9.265012245041102e+216 | 0.1 | 2.568584262099785e+213

50 | 5.780276353383284e+211 | 2 | -6.014424556016512e+213 | 1.0 | nan

100 | 2.675782384307962e+213 | 4 | 4.623375895693051e+211 | 10.0 | nan

200 | 2.3801239736057623e+217 | 8 | 1.8243548133165008e+207 | 100.0 | nan
```

```
Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-4793979486.172105 | 1 |8.316682554577971e+105 | 0.1 |-1.7340009822518483e+104

50 |2.7689020592554265e+87 | 2 |-2.0511130582940814e+113 | 1.0 |2.0976678569285316e+207

100 |1.6676593256187987e+115 | 4 |4.633462181563116e+105 | 10.0 |nan

200 |5.276484221470446e+139 | 8 |2.4297282165024557e+105 | 100.0 |nan
```

```
Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.0141356777924804e+208 | 1 |4.083025005703933e+218 | 0.1 |-6.697944554586975e+214

50 |-4.183565232281659e+210 | 2 |1.171122082931671e+214 | 1.0 | nan

100 |8.026833611479678e+212 | 4 |2.928483839824136e+209 | 10.0 | nan

200 |8.81775679880251e+217 | 8 |-5.449544473416421e+206 | 100.0 | nan
```

```
Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1.1274260378534926e+33 | 1 | 4.268182736772302e+115 | 0.1 | 1.1234761122270622e+110

50 | 2.932262852514874e+73 | 2 | 9.813747114328925e+112 | 1.0 | 1.4965564849988106e+214

100 | -7.844988838878303e+103 | 4 | -6.247152286555251e+110 | 10.0 | nan

200 | 6.35152029550069e+140 | 8 | -1.3522408970870843e+102 | 100.0 | nan
```

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-1.230856464234532e+210 | 1 |6.381550906825645e+216 | 0.1 |2.2615564394475886e+213

50 |1.2812129304732847e+210 | 2 |6.221479821638222e+211 | 1.0 | nan

100 |1.4262026509901212e+215 | 4 |-6.2414197216768884e+209 | 10.0 | nan

200 |5.669105892599309e+217 | 8 |7.632064314622643e+206 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 9.463172948959124e+23 | 1 | 4.545580875819461e+106 | 0.1 | 9.257072174576317e+99
- 50 | 2.763597412547109e+84 | 2 | 4.824020828059737e+113 | 1.0 | 6.976346928108106e+201
- 100 | 2.458482467043733e+113 | 4 | 4.3905100992513477e+108 | 10.0 | -2.9226632773053035e+300
- 200 | 4.789984752701201e+140 | 8 | 1.9293768070774775e+103 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |2.4856409122087888e+210 | 1 |3.038863129977156e+216 | 0.1 |-8.054205714456736e+214
- 50 |-1.3301475080717356e+211 | 2 |-1.9630716055201428e+214 | 1.0 | nan
- 100 | 2.477363850573087e+214 | 4 | -1.1126160402255168e+212 | 10.0 | nan
- 200 |1.770181550703144e+220 | 8 |5.021427897507678e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |2.5024802782000747e+23 | 1 |2.375165063901204e+115 | 0.1 |2.5496372619890895e+102
- 50 |1.6467706341591498e+76 | 2 |-6.423413840593868e+107 | 1.0 |5.436083507690072e+200
- 100 |2.0811170159144658e+109 | 4 |1.5566965757356198e+107 | 10.0 |nan
- 200 |-1.2761135426690757e+141 | 8 | 2.3205364822257557e+102 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-4.4870359346120733e+210 | 1 |2.1759966972141229e+217 | 0.1 |5.0437618866491745e+213
50 | 3.7395091212551503e+211 | 2 | -1.2203785366082375e+213 | 1.0 | | | | | | |
100 |-7.530891666344876e+214 | 4 | 1.0712069419134105e+212 | 10.0 | nan
200 |1.1512220007191568e+217 | 8 |1.0616987092027706e+208 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 180642133.60725474 | 1 | -4.2776235568409354e+120 | 0.1 | 7.309369393055415e+109
50 | 1.8663553612269406e+79 | 2 | 1.9875572522386216e+113 | 1.0 | -7.2595159075958415e+211
100 | 6.534645882876218e+106 | 4 | -3.1287467673240004e+103 | 10.0 | nan
200 | 2.8206267817815265e+137 | 8 | -2.1975013977608078e+101 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-2.810126781564308e+210 | 1 |-1.8338606480109386e+218 | 0.1 |-5.797468387307523e+213
50 | 2.0124360891240184e+213 | 2 | 5.001045589126764e+215 | 1.0 | nan
100 |-7.736169817597755e+212 | 4 | 1.7920539390079883e+209 | 10.0 | nan
200 | 9.425193629791585e+216 | 8 | 4.0571723920307434e+208 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-4.297453500405771e+29 | 1 |1.2779856434424265e+114 | 0.1 |3.363489014477811e+114
50 |5.061914233503368e+73 | 2 |-3.6100856962245572e+112 | 1.0 | 1.77885898646992e+214
```

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

100 |1.7194671106111564e+114 | 4 |2.7966726163805136e+108 | 10.0 |nan

200 |-1.5277714699669322e+140 | 8 |-2.41944922114597e+108 | 100.0 |nan

```
10 |1.2417820504420954e+210 | 1 |-2.3634029207321836e+220 | 0.1 |9.468875952291304e+213
```

- 50 | 9.223161196613771e+211 | 2 | 2.568831871387737e+215 | 1.0 | nan
- 100 |5.435230415159559e+213 | 4 |4.860984283347268e+211 | 10.0 | nan
- 200 | 5.452838649413212e+217 | 8 | 6.589560352848724e+206 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |5.773820805604853e+23 | 1 |1.8142959773840674e+118 | 0.1 |2.0981696536407788e+102
- 50 | 1.5168972049887213e+84 | 2 | 1.715324889101169e+113 | 1.0 | -2.485563815923274e+211
- 100 | 1.5771005645757826e+104 | 4 | 7.540422511446602e+109 | 10.0 | 5.799871841313753e+307
- 200 |3.0987144732049094e+145 | 8 |2.891342152248225e+103 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 4.475495849583765e+209 | 1 | 5.022491001853893e+216 | 0.1 | 1.354848961647384e+213
- 50 |-3.181577098240367e+211 | 2 | 2.168836909650311e+213 | 1.0 | nan
- 100 | 4.497628258161258e+214 | 4 | 2.806125003213243e+210 | 10.0 | nan
- 200 |3.920384173466373e+216 | 8 |1.1160408457585735e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 1.960212568244029e+38 | 1 | 4.052583161313552e+112 | 0.1 | 1.7375241324327423e+115
- 50 | 5.297694199102047e+86 | 2 | 9.416960958602079e+109 | 1.0 | 1.4771073335162112e+214
- 100 |-1.7917353635961024e+114 | 4 |-1.0250994441682056e+101 | 10.0 | 1.0563685800165717e+305
- 200 | 2.001057447711207e+137 | 8 | 5.262550918387536e+107 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

```
10 |-3.9942699359746136e+209 | 1 |1.4463142205200143e+217 | 0.1 |-9.291799311422099e+214
50 |-1.9873213353826429e+214 | 2 |6.400581237370447e+213 | 1.0 |nan
100 |-3.1933169883082972e+212 | 4 |4.564996025064154e+212 | 10.0 |nan
200 |-1.0703040577447539e+218 | 8 |1.1664999886531881e+207 | 100.0 |nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-1512511410533.029 | 1 |4.79537621056658e+112 | 0.1 |6.899254420299416e+108

50 |2.0000157941196543e+79 | 2 |6.037456694341677e+115 | 1.0 |1.7205155776975242e+213

100 |7.109898504393373e+105 | 4 |-1.2673770150823505e+109 | 10.0 |nan

200 |2.395761124962038e+140 | 8 |8.06841149006814e+101 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-7.039959206880416e+209 | 1 |-4.662824665723458e+218 | 0.1 | 1.3687533394217064e+214

50 |-1.5239093434912065e+211 | 2 |1.9746016908132543e+215 | 1.0 | nan

100 |6.57289027778544e+214 | 4 |9.546795525015412e+209 | 10.0 | nan

200 |3.52068871240161e+217 | 8 |2.7104980107370363e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-4.757333660277977e+19 | 1 |-2.493302719685074e+119 | 0.1 |5.297566298206638e+118

50 |3.441938104548407e+73 | 2 |6.971677304369064e+108 | 1.0 |6.529829388378185e+209

100 |2.3618327705620883e+108 | 4 |1.5389446920362367e+111 | 10.0 |-inf

200 |-1.5655915078449812e+140 | 8 |-4.575118736050669e+101 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2.7937239811708937e+211 | 1 |-2.5547344981198294e+218 | 0.1 |-6.493971182166055e+214

```
50 |4.333990269255578e+212 | 2 |1.1323905096225124e+213 | 1.0 | nan
100 |2.890184101498187e+215 | 4 |1.6870586344780237e+209 | 10.0 | nan
200 |-1.4239707844932668e+217 | 8 |-3.613538886357251e+206 | 100.0 | nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2312686825602.6743 | 1 |2.3615046593456623e+116 | 0.1 |-2.6167826761824895e+103

50 |-9.665694780116781e+80 | 2 |3.147524702629351e+105 | 1.0 |1.265330827004492e+211

100 |-9.451676505277336e+112 | 4 |-3.774923747467878e+104 | 10.0 | nan

200 |-1.0223750724276194e+139 | 8 |3.1617015821317307e+105 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 7.228808292030386e+210 | 1 | 3.654628648892706e+218 | 0.1 | 1.4453859509763066e+211

50 | 6.164551523922901e+211 | 2 | -6.060894727779879e+215 | 1.0 | nan

100 | 7.909958870814523e+214 | 4 | 3.244331707193799e+211 | 10.0 | nan

200 | 9.560147529481475e+217 | 8 | -2.6269562777609943e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 16.534368868192804 | 1 | -1.4028369261034433e+116 | 0.1 | 3.0832049148270723e+107

50 | 9.544258390804004e+81 | 2 | 1.1027677029729915e+107 | 1.0 | 1.5827510704368958e+207

100 | 3.5079513433247546e+111 | 4 | 2.821300147159528e+103 | 10.0 | nan

200 | 6.357842045279456e+136 | 8 | 1.0323893014230589e+107 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2.23864905923315e+208 | 1 |1.6492880999057154e+217 | 0.1 |1.7221338817334472e+213

50 |-9.631078185999422e+211 | 2 |5.2711273225207244e+212 | 1.0 | nan

```
100 |5.693006497562238e+215 | 4 |4.323632763919489e+209 | 10.0 |nan
200 |2.7735465228963215e+216 | 8 |4.1193525894004835e+206 | 100.0 |nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |31629653.54722107 | 1 |4.9424364600594764e+119 | 0.1 |-9.384067921392853e+115

50 |3.866392810036961e+73 | 2 |-4.185522755792585e+117 | 1.0 |6.732083600110247e+205

100 |-5.881020461152334e+109 | 4 |1.1884651114275092e+110 | 10.0 |2.468580853090591e+307

200 |-3.7994055507195297e+136 | 8 |-2.0453554329020384e+102 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2.117576602466677e+209 | 1 |3.3534994258753144e+214 | 0.1 |-2.2367060599806936e+215

50 |1.6778877199291408e+212 | 2 |1.143044456416592e+214 | 1.0 | nan

100 |2.5138832825745677e+215 | 4 |1.2431418242379432e+210 | 10.0 | nan

200 |5.664905805458244e+217 | 8 |1.5603370402776056e+206 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |3.2852567218469663e+19 | 1 |-6.812532087184896e+117 | 0.1 |1.791128100069256e+112

50 |-1.3599801224507158e+78 | 2 |4.758655038938794e+109 | 1.0 |3.3548720979853076e+200

100 |-3.159104976751027e+116 | 4 |1.0258996756054082e+108 | 10.0 |5.813304379322257e+304

200 |3.205064113158169e+141 | 8 |-2.5836547481311277e+105 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 6.861775420881827e+208 | 1 | 2.8415752034524604e+218 | 0.1 | 4.8868458162785736e+215

50 | 2.4313958147001828e+213 | 2 | -7.949033916957899e+212 | 1.0 | nan

100 | -2.748847375367414e+214 | 4 | -1.6477711913566989e+212 | 10.0 | nan

```
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |222210838589.31702 | 1 |1.048498682202552e+115 | 0.1 |1.3688696322466742e+109
50 | 4.331434069256869e+68 | 2 | -2.0447571514836e+107 | 1.0 | 2.4957238892139768e+206
100 |5.274163067686632e+100 | 4 |-6.538832571261431e+102 | 10.0 | nan
200 |1.031249162317036e+134 | 8 |-9.862676818049747e+102 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |1.0991785244859063e+211 | 1 |2.018629486284991e+218 | 0.1 |1.1666546792222745e+213
50 |-1.1556324470655328e+211 | 2 | 3.6610635816492964e+213 | 1.0 | nan
100 |1.869850829829545e+212 | 4 |-2.7752181031330745e+210 | 10.0 | nan
200 | 9.41827661060726e+218 | 8 | 4.9963895597982694e+207 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 34486.99553457892 | 1 | 7.971186299368589e+108 | 0.1 | 1.962894937549345e+113
50 |5.3682770757674206e+79 | 2 |1.3274255745294257e+111 | 1.0 |1.4262489057588542e+208
100 |8.087157865994455e+112 | 4 |3.288654377702259e+111 | 10.0 |nan
200 |1.0189532117848103e+142 | 8 |6.628621549504055e+105 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |7.24046685105125e+207 | 1 |1.3261402344818238e+216 | 0.1 |5.795881679561243e+215
50 | 7.180892594247852e+209 | 2 | 6.798717609946388e+212 | 1.0 | nan
100 |5.208894669842217e+214 | 4 |1.536252413110984e+211 | 10.0 | nan
200 | 2.8640681784164634e+218 | 8 | 1.6515416495739516e+206 | 100.0 | nan
```

```
Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 0.2819572084565329 | 1 | 1.5209556191952232e+109 | 0.1 | -3.539851436559606e+108

50 | 1.2080233555974786e+76 | 2 | -2.0370980783508147e+107 | 1.0 | 5.0275062602879866e+206

100 | 3.0759995681514826e+104 | 4 | 9.39016043319223e+103 | 10.0 | -inf

200 | -6.37160051823048e+141 | 8 | 2.8280928663633546e+103 | 100.0 | nan
```

```
Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-1.789194054737817e+210 | 1 |5.653988483925868e+219 | 0.1 |-8.424980555228248e+214

50 |1.0420787746382297e+210 | 2 |2.9258858299320865e+213 | 1.0 | nan

100 |3.254590873259859e+212 | 4 |3.758755946023058e+209 | 10.0 | nan

200 |-9.410806117007835e+216 | 8 |4.922142003006977e+208 | 100.0 | nan
```

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-111030989195.0353 | 1 |1.6605394849938873e+108 | 0.1 |2.647043679342675e+112

50 |2.9630071456308273e+69 | 2 |7.771493058438369e+105 | 1.0 |8.629389966108618e+213

100 |3.0751777888999723e+113 | 4 |-2.6413837866338894e+103 | 10.0 |nan

200 |4.147782675843174e+143 | 8 |1.8626416759119118e+100 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 2.2082690441551187e+209 | 1 | 2.074987615257864e+218 | 0.1 | 9.320842998156603e+211

50 | -3.095807529458024e+210 | 2 | 1.0061978904055831e+213 | 1.0 | nan

100 | 5.1896201894310066e+212 | 4 | 4.6076555325565584e+210 | 10.0 | nan

200 | 6.4100381449629616e+218 | 8 | -9.8459806547834e+209 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 0.39946545374224174 | 1 | -1.3750336711125222e+108 | 0.1 | 1.195464822638583e+106

50 | 1.0298996934812005e+86 | 2 | 1.0527322028949962e+110 | 1.0 | 2.8432728670152656e+204

100 | 5.8123611858801455e+113 | 4 | 9.971545739206162e+100 | 10.0 | 2.243725905236675e+301

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 | 2.5494631968652987e+210 | 1 | 1.3515686151304811e+219 | 0.1 | -3.023722795230347e+213
- 50 | 2.05627558454757e+212 | 2 | 2.1670934641196004e+212 | 1.0 | nan

200 | 3.39866402036759e+143 | 8 | -2.050144287692182e+104 | 100.0 | nan

- 100 |-7.427742822466881e+213 | 4 |1.0110191656431314e+210 | 10.0 | nan
- 200 |1.0454333739952234e+217 | 8 |1.8018362537823652e+207 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |1.0173766401275547e+17 | 1 |7.377284841675986e+119 | 0.1 |6.12359667238757e+108
- 50 |-8.953539959263947e+85 | 2 | 1.0609083110224302e+104 | 1.0 | -1.0978898000646534e+216
- 100 |1.6412858732066194e+108 | 4 |-4.431563737879841e+105 | 10.0 |nan
- 200 |1.0558853839212934e+139 | 8 |6.669058297244642e+104 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |-2.07176904540019e+210 | 1 |4.847590308635903e+217 | 0.1 |3.501520344524358e+214
- 50 | 2.932680612646422e+213 | 2 | 1.5005307381745495e+216 | 1.0 | nan
- 100 |2.4051722639317367e+213 | 4 |7.869817860774859e+210 | 10.0 |nan
- 200 |-1.2822745966436432e+217 | 8 | 1.859194279106361e+206 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 7607657681.959407 | 1 | 2.3523304148498917e+117 | 0.1 | 1.3424227092022626e+113
50 | 1.2510294253402544e+87 | 2 | 1.8626011116782328e+112 | 1.0 | -3.4252774504026406e+214
100 | 4.333494006966124e+110 | 4 | 5.508926259686591e+104 | 10.0 | 1.0718833349534291e+306
200 |-1.7456151715758696e+139 | 8 | 4.852648268757867e+101 | 100.0 | nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |2.4847756700443987e+208 | 1 |3.0491365353730256e+219 | 0.1 |1.5878848054884207e+215
50 |-2.351295907593162e+213 | 2 |5.396936227780599e+215 | 1.0 | nan
100 |1.944168495438501e+214 | 4 |2.8398685635458535e+210 | 10.0 |nan
200 |2.536377354056239e+219 | 8 |-1.2459479069179761e+209 | 100.0 |nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |2.34279531467458e+23 | 1 |2.676343878117755e+114 | 0.1 |2.2507451555428074e+109
50 | 2.6925428089427353e+77 | 2 | 4.635851101467152e+112 | 1.0 | -3.1150323024469405e+211
100 | 1.5780946079654223e+110 | 4 | 1.466406613410248e+100 | 10.0 | 7.303308756353538e+305
200 |1.7255405787286054e+136 | 8 |3.126865905445952e+104 | 100.0 |nan
```

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-8.224081940224896e+209 | 1 |8.203245763937687e+217 | 0.1 |5.6825041335030605e+212

50 |3.937508283616992e+212 | 2 |-8.395452854425826e+214 | 1.0 | nan

100 |5.57091308492374e+215 | 4 |4.861488940297035e+208 | 10.0 | nan

200 |1.8332366619617454e+218 | 8 |-2.2694496879890996e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

```
10 |33.105582706219536 | 1 |1.5630491588013527e+115 | 0.1 |1.4727007957547217e+112
```

50 |-6.3414889009447405e+78 | 2 |6.199105835058454e+113 | 1.0 |-9.307304647200071e+208

100 | 1.477835025061924e+111 | 4 | -1.5295463149263359e+106 | 10.0 | -1.74294270221403e+305

200 |-1.3115603084634156e+142 | 8 |-4.77009194416044e+106 | 100.0 | nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1.873972668316769e+209 | 1 | 1.373546009524462e+218 | 0.1 | 1.0578578638484961e+215

50 | 3.595468240434825e+211 | 2 | 7.539515897157456e+214 | 1.0 | nan

100 |-1.0162745197972116e+215 | 4 |1.7153280802927605e+208 | 10.0 | nan

200 | 4.6618795191914155e+216 | 8 | -7.898400918184576e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 89994629695.42435 | 1 | -3.208314467281618e+114 | 0.1 | -1.2518958987789966e+105

50 | 1.444738299903465e+82 | 2 | 3.619371359215702e+114 | 1.0 | 2.175857248653924e+201

100 | 1.5897896290177855e+102 | 4 | -5.501833361503429e+105 | 10.0 | nan

200 |2.047570016260969e+139 | 8 |5.403400960668278e+103 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |8.848725321818371e+208 | 1 |3.3062178159867884e+218 | 0.1 |3.494100574486856e+215

50 |-7.115310991424298e+210 | 2 |-1.584765859958402e+215 | 1.0 | nan

100 |8.431010787221646e+213 | 4 |-1.0329736134021042e+210 | 10.0 |nan

200 |4.395497729266238e+215 | 8 |-2.4751174069678843e+208 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-17152707.216563214 | 1 |-1.6465087566325106e+118 | 0.1 | 3.219298049499785e+112

```
50 |-4.265533157264016e+83 | 2 |1.917523908998881e+107 | 1.0 |7.5067469798538e+210
100 |-4.462915271504992e+110 | 4 |-3.0904895085645947e+111 | 10.0 |-inf
200 |2.8629310726257233e+137 | 8 |4.7756328206790796e+101 | 100.0 |nan
```

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 | 4.068912961491508e+212 | 1 | 1.522667941803755e+217 | 0.1 | 1.6504300392110376e+215
- 50 | 6.412664311668106e+211 | 2 | 1.4034162141939654e+213 | 1.0 | nan
- 100 |1.0585121870743924e+213 | 4 |9.213106964507121e+210 | 10.0 |nan
- 200 | 1.8045832491496834e+217 | 8 | -1.0980292604829625e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 |1.1770998343497352e+17 | 1 |5.047352802684239e+114 | 0.1 | |2.2696399534563454e+113
- 50 | 6.268825050991161e+75 | 2 | 1.2783235846402743e+107 | 1.0 | -3.001389098428917e+206
- 100 |-1.3074613842700667e+113 | 4 |1.1971839419182339e+110 | 10.0 |nan
- 200 |1.1661443975666693e+142 | 8 |3.4134063410387392e+103 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

```
n Train Accuracy | d Train Accuracy | eta Train Accuracy
```

- 10 |1.62478106309587e+210 | 1 |-6.534151327883731e+218 | 0.1 |2.8324925217693804e+214
- 50 |8.2143060827167e+211 | 2 |4.21448216383771e+215 | 1.0 |nan
- 100 |-9.58058361817666e+214 | 4 | 4.837453638750577e+211 | 10.0 | nan
- 200 | 3.085493673770858e+217 | 8 | -4.1975075109402567e+207 | 100.0 | nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

- 10 |4.435342061440804e+24 | 1 |-3.8811753084542345e+113 | 0.1 |1.0901504632933053e+109
- 50 | 6.282695240051364e+80 | 2 | 1.1114834239119378e+115 | 1.0 | 9.633530399950132e+206

```
100 | 4.858703459778015e+105 | 4 | 4.069225306586355e+113 | 10.0 | nan
200 | -2.995684584941822e+137 | 8 | 5.834678622014509e+102 | 100.0 | nan
```

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |-3.862262252937514e+210 | 1 |7.004046467872871e+217 | 0.1 |-4.8938811413925154e+213

50 |2.346008584552684e+213 | 2 |3.579987900835508e+212 | 1.0 |nan

100 |-8.756078561599857e+212 | 4 |6.043446677041595e+210 | 10.0 |nan

200 |3.142337975229202e+217 | 8 |-1.6133585948663743e+205 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |1.4619902258800357e+30 | 1 |9.88961281654279e+112 | 0.1 |4.986817586407131e+107

50 |1.1339567821752384e+87 | 2 |-4.9300775127757725e+109 | 1.0 |8.335699028630668e+207

100 |2.860835552437352e+109 | 4 |6.096607826792125e+102 | 10.0 |nan

200 |4.446987731317298e+143 | 8 |2.5358681834882754e+103 | 100.0 |nan

Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 |2.4284456088697287e+207 | 1 |-2.7094011360412828e+218 | 0.1 |4.973895400368286e+213

50 |1.488694399642186e+212 | 2 |2.0705802400736193e+214 | 1.0 |nan

100 |1.9588899193613342e+213 | 4 |1.8434709595352786e+210 | 10.0 |nan

200 |-5.13094594325114e+220 | 8 |2.4939525532758424e+209 | 100.0 |nan

Table: Training accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 2.1609609580098617e+31 | 1 | 1.0858514710929044e+105 | 0.1 | 1.5620475703756194e+106

50 | -7.859725662753783e+86 | 2 | -1.4128151751261687e+114 | 1.0 | -1.5439256686766505e+213

100 | -1.5995383708859058e+109 | 4 | 3.611190978164333e+102 | 10.0 | -inf

```
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-9.740011772478286e+212 | 1 |9.381402300776995e+217 | 0.1 |2.4287051174030895e+215
50 |1.1246420752563472e+212 | 2 |4.885153678522617e+215 | 1.0 |nan
100 |8.1487792926290535e+214 | 4 |5.55319822077979e+210 | 10.0 |nan
200 | 5.470372376975281e+217 | 8 | 3.083254670672823e+207 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 | 3900377344491932.0 | 1 | -5.887775137223824e+112 | 0.1 | 3.006108223019421e+105
50 |-1.542943610570632e+77 | 2 |9.377051425520647e+112 | 1.0 |-1.1200379664711533e+209
100 |4.5250197509263984e+111 | 4 |1.8184681715117387e+103 | 10.0 |nan
200 |1.0016886119644676e+140 | 8 |2.8611343669399314e+107 | 100.0 |nan
Table: Test accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |3.226178796000382e+210 | 1 |2.1716421468530835e+216 | 0.1 |3.920901825295131e+213
50 | 4.801961978507288e+212 | 2 | -4.539338147523738e+214 | 1.0 | nan
100 |-3.740930037902427e+215 | 4 | 9.200630584344656e+208 | 10.0 | nan
200 |-2.59798310222858e+218 | 8 | 4.096517059904767e+207 | 100.0 | nan
Table: Training accuracies with different hyper-parameters
n Train Accuracy | d Train Accuracy | eta Train Accuracy
10 |-1.8767451639943852e+18 | 1 |-3.7360565423263436e+111 | 0.1 |-
4.9213704024168455e+107
50 | 7.184319948227954e+78 | 2 | -7.468730060892563e+101 | 1.0 | -1.5819334641347882e+204
100 |1.3258701633847002e+106 | 4 |2.0220198154728718e+109 | 10.0 |-inf
```

```
Table: Test accuracies with different hyper-parameters

n Train Accuracy | d Train Accuracy | eta Train Accuracy

10 | 1.6772170644314406e+208 | 1 | -3.2129071383124196e+218 | 0.1 | -5.470861587194502e+213

50 | 9.442963359332107e+212 | 2 | 7.346182358752401e+213 | 1.0 | nan

100 | 1.153943092266797e+213 | 4 | 7.771180621489425e+210 | 10.0 | nan

200 | -1.6000391726757255e+218 | 8 | 4.3407632922284933e+207 | 100.0 | nan

2e)
```

The data that I seen in the tables is that I realized that the eta hyper parameter has a huge impact on the data points. It is because I seen they cause the training parameters to have high values than the cause of other hyper parameters. If the step size if very high, then the average of the w vector has a high value. Also, as the dimensions (d) increases, then the test data decreases. It is because when the vector w has more parameters, then it gets closer to the curve. The other thing we notice on the tables is that the more of the test case points can causes the averages to have a bigger value. If there are more amount of data points then there will be a bigger average.

3d) Removed the name data from the parkinsons data as this data is not directly correlated with the data and could lead to improper correlations made by the model.