















accuracy

| | epoch | noisy_train |        |
|----|--------|--------------------|---|
| 0 | 100.0 | 0.4498640893989731 | 0.4137291280148423 |
| 1 | 200.0 | 0.4498640893989731 | 0.4137291280148423 |
| 2 | 300.0 | 0.4498640893989731 | 0.4137291280148423 |
| 3 | 400.0 | 0.4498640893989731 | 0.4137291280148423 |
| 4 | 500.0 | 0.4498640893989731 | 0.4137291280148423 |
| 5 | 600.0 | 0.4498640893989731 | 0.4137291280148423 |
| 6 | 700.0 | 0.4498640893989731 | 0.4137291280148423 |
| 7 | 800.0 | 0.4498640893989731 | 0.4137291280148423 |
| 8 | 900.0 | 0.5528541226215645 | 0.588126159554731 |
| 9 | 1000.0 | 0.5508909694956207 | 0.5862708719851577 |
| 10 | 1100.0 | 0.5513440048323769 | 0.5862708719851577 |
| 11 | 1200.0 | 0.5699184536393839 | 0.6196660482374768 |
| 12 | 1300.0 | 0.561763817577771 | 0.5974025974025974 |
| 13 | 1400.0 | 0.5900030202355784 | 0.6549165120593692 |
| 14 | 1500.0 | 0.5966475385080037 | 0.6623376623376623 |
| 15 | 1600.0 | 0.6164300815463606 | 0.7365491651205937 |
| 16 | 1700.0 | 0.5972515856236786 | 0.7532467532467533 |
| 17 | 1800.0 | 0.6103896103896104 | 0.7532467532467533 |
| 18 | 1900.0 | 0.5986106916339474 | 0.7532467532467533 |
| 19 | 2000.0 | 0.5990637269707038 | 0.7606679035250464 |
| 20 | 2100.0 | 0.5771670190274841 | 0.7291280148423006 |
| 21 | 2200.0 | 0.5696164300815464 | 0.712430426716141 |
| 22 | 2300.0 | 0.593325279371791 | 0.7606679035250464 |
| 23 | 2400.0 | 0.5816973723950468 | 0.7235621521335807 |
| 24 | 2500.0 | 0.5838115372999094 | 0.7328385899814471 |
| 25 | 2600.0 | 0.5842645726366656 | 0.7291280148423006 |
| 26 | 2700.0 | 0.5856236786469344 | 0.7272727272727273 |
| 27 | 2800.0 | 0.5928722440350347 | 0.7346938775510204 |
| 28 | 2900.0 | 0.5829054666263969 | 0.7235621521335807 |
| 29 | 3000.0 | 0.5952884324977348 | 0.7328385899814471 |
| 30 | 3100.0 | 0.5972515856236786 | 0.7328385899814471 |

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|----|--------|--------------------|--------------------|
| 31 | 3200.0 | 0.5981576562971912 | 0.738404452690167 |
| 32 | 3300.0 | 0.6046511627906976 | 0.7569573283858998 |
| 33 | 3400.0 | 0.6168831168831169 | 0.7717996289424861 |
| 34 | 3500.0 | 0.6229235880398671 | 0.7866419294990723 |
| 35 | 3600.0 | 0.628511023859861 | 0.7959183673469388 |
| 36 | 3700.0 | 0.6301721534279674 | 0.8126159554730983 |
| 37 | 3800.0 | 0.6395348837209303 | 0.8070500927643784 |
| 38 | 3900.0 | 0.6552401087284808 | 0.8404452690166976 |
| 39 | 4000.0 | 0.6733615221987315 | 0.8608534322820037 |
| 40 | 4100.0 | 0.6925400181214135 | 0.8998144712430427 |
| 41 | 4200.0 | 0.6899728178797946 | 0.9016697588126159 |
| 42 | 4300.0 | 0.7047719722138327 | 0.8961038961038961 |
| 43 | 4400.0 | 0.7123225611597704 | 0.9128014842300557 |
| 44 | 4500.0 | 0.6893687707641196 | 0.862708719851577 |
| 45 | 4600.0 | 0.7171549380851706 | 0.9128014842300557 |
| 46 | 4700.0 | 0.7236484445786772 | 0.9072356215213359 |
| 47 | 4800.0 | 0.712020537601933 | 0.9165120593692022 |
| 48 | 4900.0 | 0.7224403503473271 | 0.8961038961038961 |
| 49 | 5000.0 | 0.7201751736635458 | 0.9239332096474954 |
| 50 | 5100.0 | 0.7289338568408336 | 0.8831168831168831 |
| 51 | 5200.0 | 0.7310480217456962 | 0.8961038961038961 |
| 52 | 5300.0 | 0.7310480217456962 | 0.8942486085343229 |
| 53 | 5400.0 | 0.7287828450619148 | 0.8923933209647495 |
| 54 | 5500.0 | 0.7328601630927213 | 0.8942486085343229 |
| 55 | 5600.0 | 0.7307459981878587 | 0.8961038961038961 |
| 56 | 5700.0 | 0.7331621866505588 | 0.8923933209647495 |
| 57 | 5800.0 | 0.7315010570824524 | 0.8849721706864564 |
| 58 | 5900.0 | 0.733615221987315 | 0.8923933209647495 |
| 59 | 6000.0 | 0.7346723044397463 | 0.8923933209647495 |
| 60 | 6100.0 | 0.7340682573240713 | 0.8775510204081632 |
| 61 | 6200.0 | 0.7357293868921776 | 0.8923933209647495 |
| 62 | 6300.0 | 0.7376925400181215 | 0.8868274582560297 |
| 63 | 6400.0 | 0.7370884929024464 | 0.8868274582560297 |
| 64 | 6500.0 | 0.7389006342494715 | 0.8831168831168831 |

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|----|--------|--------------------|--------------------|
| 65 | 6600.0 | 0.7354273633343401 | 0.8738404452690167 |
| 66 | 6700.0 | 0.7405617638175778 | 0.8831168831168831 |
| 67 | 6800.0 | 0.739202657807309 | 0.8961038961038961 |
| 68 | 6900.0 | 0.7358803986710963 | 0.8738404452690167 |
| 69 | 7000.0 | 0.7413168227121716 | 0.8794063079777366 |
| 70 | 7100.0 | 0.7440350347327092 | 0.8831168831168831 |
| 71 | 7200.0 | 0.7420718816067653 | 0.8905380333951762 |
| 72 | 7300.0 | 0.7456961643008154 | 0.8831168831168831 |
| 73 | 7400.0 | 0.7390516460283902 | 0.8664192949907236 |
| 74 | 7500.0 | 0.7444880700694654 | 0.8775510204081632 |
| 75 | 7600.0 | 0.747810329205678 | 0.8849721706864564 |
| 76 | 7700.0 | 0.7497734823316219 | 0.8905380333951762 |
| 77 | 7800.0 | 0.7499244941105406 | 0.8886827458256029 |
| 78 | 7900.0 | 0.7476593174267593 | 0.8849721706864564 |
| 79 | 8000.0 | 0.7517366354575656 | 0.8868274582560297 |
| 80 | 8100.0 | 0.7517366354575656 | 0.8812615955473099 |
| 81 | 8200.0 | 0.7524916943521595 | 0.8942486085343229 |

loss








| | epoch | noisy_train |        |
|----|--------|--------------------|---|
| 0 | 100.0 | 0.7129602420733171 | 0.7227085688534904 |
| 1 | 200.0 | 0.7031203511256526 | 0.708913571694318 |
| 2 | 300.0 | 0.6987763867861982 | 0.7024019886465633 |
| 3 | 400.0 | 0.6959937707237576 | 0.6979869148310494 |
| 4 | 500.0 | 0.6945880789687668 | 0.6956435862709495 |
| 5 | 600.0 | 0.6938500361166139 | 0.6943715986083535 |
| 6 | 700.0 | 0.693371243810884 | 0.6935261628207039 |
| 7 | 800.0 | 0.6931811222707592 | 0.6931829838191762 |
| 8 | 900.0 | 0.69305872341285 | 0.6929579622605267 |
| 9 | 1000.0 | 0.693037990498658 | 0.6929158533320707 |
| 10 | 1100.0 | 0.6930281341363842 | 0.6928916573524475 |
| 11 | 1200.0 | 0.6930422267476142 | 0.692911751130048 |
| 12 | 1300.0 | 0.6930228419925856 | 0.6928708448129541 |

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|----|--------|--------------------|---------------------|
| 13 | 1400.0 | 0.6930291960780747 | 0.6928755360491136 |
| 14 | 1500.0 | 0.6930189817999872 | 0.6928497622994816 |
| 15 | 1600.0 | 0.6930418607693364 | 0.6928845854366527 |
| 16 | 1700.0 | 0.693041996103554 | 0.6928780464565053 |
| 17 | 1800.0 | 0.6930245751344063 | 0.6928394997821135 |
| 18 | 1900.0 | 0.6930181611563273 | 0.6928188099580652 |
| 19 | 2000.0 | 0.6930057043614595 | 0.6927874263595132 |
| 20 | 2100.0 | 0.6930037293457179 | 0.6927729845046997 |
| 21 | 2200.0 | 0.6929937229640242 | 0.6927441358566284 |
| 22 | 2300.0 | 0.6929571003729594 | 0.6926655909594368 |
| 23 | 2400.0 | 0.6929481075581722 | 0.6926361252279842 |
| 24 | 2500.0 | 0.6929190587882258 | 0.6925663422135746 |
| 25 | 2600.0 | 0.6928906224776006 | 0.6924974602811477 |
| 26 | 2700.0 | 0.6928474862794369 | 0.6923956906094271 |
| 27 | 2800.0 | 0.6927897705548052 | 0.692266955095179 |
| 28 | 2900.0 | 0.6927334502123405 | 0.6921287669855005 |
| 29 | 3000.0 | 0.6926245202764797 | 0.6918847911498126 |
| 30 | 3100.0 | 0.6924630769209009 | 0.6915178614504197 |
| 31 | 3200.0 | 0.6922346969733492 | 0.6910014152526855 |
| 32 | 3300.0 | 0.691764573832065 | 0.689949302112355 |
| 33 | 3400.0 | 0.6910475141184341 | 0.6883429534295026 |
| 34 | 3500.0 | 0.6896820598178439 | 0.685196603045744 |
| 35 | 3600.0 | 0.6869010893619003 | 0.6786505299455979 |
| 36 | 3700.0 | 0.6799217986599835 | 0.6619736026315128 |
| 37 | 3800.0 | 0.6677829251773115 | 0.6330176872365615 |
| 38 | 3900.0 | 0.6412823744442152 | 0.568526441560072 |
| 39 | 4000.0 | 0.6045474687924132 | 0.47566942607655244 |
| 40 | 4100.0 | 0.576143074510754 | 0.3971879438442342 |
| 41 | 4200.0 | 0.5691499497723465 | 0.390613655833637 |
| 42 | 4300.0 | 0.561206202864071 | 0.38071075169479146 |
| 43 | 4400.0 | 0.5477280626838333 | 0.3466336525538388 |
| 44 | 4500.0 | 0.5533767845751583 | 0.3727119836737128 |
| 45 | 4600.0 | 0.534762778431897 | 0.324578476302764 |

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|----|--------|---------------------|---------------------|
| 46 | 4700.0 | 0.5278996013932757 | 0.3183518963701585 |
| 47 | 4800.0 | 0.5388315282582085 | 0.33756820156293754 |
| 48 | 4900.0 | 0.5356030808266811 | 0.35022499894394593 |
| 49 | 5000.0 | 0.5274481447998453 | 0.31772296481272755 |
| 50 | 5100.0 | 0.5338656655400271 | 0.35169750977964964 |
| 51 | 5200.0 | 0.5234823702038198 | 0.32805591383401084 |
| 52 | 5300.0 | 0.5240863581066546 | 0.33200503885746 |
| 53 | 5400.0 | 0.5210923736078151 | 0.3227602243423462 |
| 54 | 5500.0 | 0.5187916759995447 | 0.3216365496901905 |
| 55 | 5600.0 | 0.5204755874791583 | 0.32968395948410034 |
| 56 | 5700.0 | 0.5160878754900273 | 0.3175131266607958 |
| 57 | 5800.0 | 0.5181993286390811 | 0.32798950812395883 |
| 58 | 5900.0 | 0.5142528088628382 | 0.31924743555924473 |
| 59 | 6000.0 | 0.5131774973034283 | 0.3183108257020221 |
| 60 | 6100.0 | 0.5165898780459943 | 0.32936634736902576 |
| 61 | 6200.0 | 0.5107305566037911 | 0.3112700095071512 |
| 62 | 6300.0 | 0.5120820017972431 | 0.32197894418940826 |
| 63 | 6400.0 | 0.5082362716036718 | 0.31296325694112215 |
| 64 | 6500.0 | 0.5104001129882924 | 0.321307654328206 |
| 65 | 6600.0 | 0.5109747705828165 | 0.32277428797062707 |
| 66 | 6700.0 | 0.5062836522353444 | 0.3127844123279347 |
| 67 | 6800.0 | 0.5022624140776298 | 0.3021395311636083 |
| 68 | 6900.0 | 0.5110437925455075 | 0.3335704913034159 |
| 69 | 7000.0 | 0.5066596222096595 | 0.32148478136343117 |
| 70 | 7100.0 | 0.503979454797823 | 0.3161640850936665 |
| 71 | 7200.0 | 0.5005654622823144 | 0.3090396803968093 |
| 72 | 7300.0 | 0.501251764199584 | 0.31528322091873956 |
| 73 | 7400.0 | 0.5064895487781884 | 0.32897907670806437 |
| 74 | 7500.0 | 0.5029353472057748 | 0.32384581557091546 |
| 75 | 7600.0 | 0.4954303498717322 | 0.305508826585377 |
| 76 | 7700.0 | 0.4954095364048861 | 0.3059304523117402 |
| 77 | 7800.0 | 0.49686273658909086 | 0.3162187399233089 |
| 78 | 7900.0 | 0.49564499447599125 | 0.31162206039709206 |
| 79 | 8000.0 | 0.49386817332051225 | 0.31159257099908944 |

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|----|--------|---------------------|--------------------|
| 80 | 8100.0 | 0.4936499049266179 | 0.3149770384325701 |
| 81 | 8200.0 | 0.48990235056566156 | 0.3043694855535732 |







normalised_entropy

| | epoch | noisy_train |   est      |
|----|--------|--------------------|---|
| 0 | 100.0 | 0.9892435958111117 | 0.9892442381227171 |
| 1 | 200.0 | 0.9961803940911553 | 0.9961797186970047 |
| 2 | 300.0 | 0.9984955094941467 | 0.9984950417711473 |
| 3 | 400.0 | 0.9995398122498867 | 0.9995396283208108 |
| 4 | 500.0 | 0.9998668963294921 | 0.9998668996212876 |
| 5 | 600.0 | 0.9999649871047332 | 0.9999650166074509 |
| 6 | 700.0 | 0.9999955922446198 | 0.9999956155752207 |
| 7 | 800.0 | 0.9999996684750413 | 0.9999996673640603 |
| 8 | 900.0 | 0.9999997848400138 | 0.9999997699857864 |
| 9 | 1000.0 | 0.9999996497529542 | 0.9999996213612176 |
| 10 | 1100.0 | 0.9999996125968119 | 0.9999995576649738 |
| 11 | 1200.0 | 0.9999997842639495 | 0.9999997345989843 |
| 12 | 1300.0 | 0.9999996776920689 | 0.9999995859744155 |
| 13 | 1400.0 | 0.9999997753349541 | 0.9999996921348218 |
| 14 | 1500.0 | 0.9999997502761606 | 0.9999996355159384 |
| 15 | 1600.0 | 0.9999998830589634 | 0.9999998018339082 |
| 16 | 1700.0 | 0.9999998856512523 | 0.9999998089112687 |
| 17 | 1800.0 | 0.9999998528155918 | 0.9999997345989843 |
| 18 | 1900.0 | 0.9999998349576009 | 0.9999997133669031 |
| 19 | 2000.0 | 0.9999998044261973 | 0.9999996602867 |
| 20 | 2100.0 | 0.9999997718785688 | 0.999999628438578 |
| 21 | 2200.0 | 0.999999714848211 | 0.999999543510253 |
| 22 | 2300.0 | 0.9999996563776927 | 0.9999993878083238 |
| 23 | 2400.0 | 0.9999995904183395 | 0.9999993276507603 |
| 24 | 2500.0 | 0.9999994720371422 | 0.999999122407308 |
| 25 | 2600.0 | 0.9999993412705643 | 0.999998934857257 |
| 26 | 2700.0 | 0.9999991215020643 | 0.9999986022213173 |
| 27 | 2800.0 | 0.999998848447624 | 0.9999981705023318 |

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|----|--------|--------------------|--------------------|
| 28 | 2900.0 | 0.9999983659938396 | 0.9999975229238535 |
| 29 | 3000.0 | 0.9999976649236838 | 0.9999964542424303 |
| 30 | 3100.0 | 0.999996155635427 | 0.9999942637993807 |
| 31 | 3200.0 | 0.999993501707565 | 0.9999903358643484 |
| 32 | 3300.0 | 0.9999863999878593 | 0.9999799109124518 |
| 33 | 3400.0 | 0.9999707131830813 | 0.9999569661099748 |
| 34 | 3500.0 | 0.9999224678046463 | 0.9998825405878127 |
| 35 | 3600.0 | 0.9997520608075325 | 0.9996106390165708 |
| 36 | 3700.0 | 0.9988480492755748 | 0.9981009814204002 |
| 37 | 3800.0 | 0.9955901782774054 | 0.9922666815083633 |
| 38 | 3900.0 | 0.9798300981305582 | 0.9640520941569766 |
| 39 | 4000.0 | 0.9349917363126773 | 0.8750930283640223 |
| 40 | 4100.0 | 0.8876845208009324 | 0.7844007736234364 |
| 41 | 4200.0 | 0.8836527559124282 | 0.7588494129216296 |
| 42 | 4300.0 | 0.8845406088430116 | 0.7574440154604655 |
| 43 | 4400.0 | 0.8642136570335118 | 0.7300481637024039 |
| 44 | 4500.0 | 0.8701893597058176 | 0.7240113610460497 |
| 45 | 4600.0 | 0.846012624143222 | 0.6911784563082268 |
| 46 | 4700.0 | 0.839162258826797 | 0.6723700932094029 |
| 47 | 4800.0 | 0.8556814504800265 | 0.7356959751674107 |
| 48 | 4900.0 | 0.8527815118004497 | 0.691449750995813 |
| 49 | 5000.0 | 0.8459864938701974 | 0.6850211899001877 |
| 50 | 5100.0 | 0.8625633852678424 | 0.6969409475521166 |
| 51 | 5200.0 | 0.8450829941712993 | 0.6765051701957971 |
| 52 | 5300.0 | 0.8439203172751115 | 0.6683740491990919 |
| 53 | 5400.0 | 0.8392356538729379 | 0.6599261013165476 |
| 54 | 5500.0 | 0.8346506943698377 | 0.655479723093461 |
| 55 | 5600.0 | 0.8380742675046192 | 0.6563248749345486 |
| 56 | 5700.0 | 0.8314646607401579 | 0.6488341152778583 |
| 57 | 5800.0 | 0.8350657626099904 | 0.6508811586199532 |
| 58 | 5900.0 | 0.8268736515546342 | 0.640619200103137 |
| 59 | 6000.0 | 0.8252926736899064 | 0.6380485117103704 |
| 60 | 6100.0 | 0.8314190890197846 | 0.6429088270509398 |

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|----|--------|--------------------|--------------------|
| 61 | 6200.0 | 0.8230437057250866 | 0.6349380701946195 |
| 62 | 6300.0 | 0.8253960839861724 | 0.6362313604974127 |
| 63 | 6400.0 | 0.8192344002765458 | 0.631342008516386 |
| 64 | 6500.0 | 0.8233854157872086 | 0.6330565185405328 |
| 65 | 6600.0 | 0.8244810592584544 | 0.6325743220511527 |
| 66 | 6700.0 | 0.817406973353472 | 0.6266900542052204 |
| 67 | 6800.0 | 0.8051879804179733 | 0.6197678826072 |
| 68 | 6900.0 | 0.8235148682186734 | 0.6325376170906817 |
| 69 | 7000.0 | 0.8216124553040989 | 0.6310964081857996 |
| 70 | 7100.0 | 0.8170318273718858 | 0.6261538114530036 |
| 71 | 7200.0 | 0.808847448106476 | 0.6189145457987882 |
| 72 | 7300.0 | 0.8125370214871862 | 0.6222706017998464 |
| 73 | 7400.0 | 0.8198977559399871 | 0.627899270774261 |
| 74 | 7500.0 | 0.8174995363604731 | 0.6264428313897581 |
| 75 | 7600.0 | 0.8012425936229709 | 0.610692142776744 |
| 76 | 7700.0 | 0.8040390887385731 | 0.611998412958545 |
| 77 | 7800.0 | 0.8092203609751129 | 0.6221818711629383 |
| 78 | 7900.0 | 0.8053972553321149 | 0.6100014366333913 |
| 79 | 8000.0 | 0.8049564067779513 | 0.6137148639487866 |
| 80 | 8100.0 | 0.8053493799309254 | 0.6147403150852182 |
| 81 | 8200.0 | 0.7995462825167975 | 0.6126421201206979 |

max_p

| | epoch | noisy_train |   test      |
|---|-------|--------------------|--|
| 0 | 100.0 | 0.5609803834878869 | 0.5609785656760928 |
| 1 | 200.0 | 0.5363675745114643 | 0.5363708011294561 |
| 2 | 300.0 | 0.5228304491414653 | 0.5228339887063446 |
| 3 | 400.0 | 0.5126279716007806 | 0.512630522804048 |
| 4 | 500.0 | 0.5067913135492849 | 0.5067912899717992 |
| 5 | 600.0 | 0.5034824755572725 | 0.5034808723294005 |
| 6 | 700.0 | 0.5012321460646685 | 0.5012273275343518 |
| 7 | 800.0 | 0.5003265826157017 | 0.5003184033678724 |
| 8 | 900.0 | 0.5002534768978154 | 0.5002655018680834 |

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|----|--------|--------------------|--------------------|
| 9 | 1000.0 | 0.5003277707481557 | 0.5003431210491344 |
| 10 | 1100.0 | 0.5003430989529567 | 0.5003639072566838 |
| 11 | 1200.0 | 0.5002430826830597 | 0.5002673136723506 |
| 12 | 1300.0 | 0.5003039314825345 | 0.5003322537622116 |
| 13 | 1400.0 | 0.5002409140893032 | 0.5002765602437375 |
| 14 | 1500.0 | 0.5002520070699579 | 0.5002941439456975 |
| 15 | 1600.0 | 0.5001472405745018 | 0.5002017224653311 |
| 16 | 1700.0 | 0.5001464749851532 | 0.5001990454537528 |
| 17 | 1800.0 | 0.5001675266760133 | 0.5002300619857873 |
| 18 | 1900.0 | 0.5001776786557643 | 0.5002421589640828 |
| 19 | 2000.0 | 0.5001947467185263 | 0.5002646702782343 |
| 20 | 2100.0 | 0.5002145077375011 | 0.5002776218478003 |
| 21 | 2200.0 | 0.5002400121167505 | 0.5003033887477443 |
| 22 | 2300.0 | 0.5002616866770485 | 0.5003511113890469 |
| 23 | 2400.0 | 0.5002882553349446 | 0.5003749160908149 |
| 24 | 2500.0 | 0.5003272947750939 | 0.5004246168543545 |
| 25 | 2600.0 | 0.5003663359434357 | 0.5004736151898725 |
| 26 | 2700.0 | 0.5004250684269819 | 0.5005453637004562 |
| 27 | 2800.0 | 0.5004874113930277 | 0.500626380014508 |
| 28 | 2900.0 | 0.500582882948276 | 0.5007298315610867 |
| 29 | 3000.0 | 0.5006974622656737 | 0.5008770017323113 |
| 30 | 3100.0 | 0.5008947158716698 | 0.5011122425765849 |
| 31 | 3200.0 | 0.5011559823098697 | 0.5014347879696424 |
| 32 | 3300.0 | 0.5016637002546885 | 0.5020626436137976 |
| 33 | 3400.0 | 0.5024231368053071 | 0.5030111921519207 |
| 34 | 3500.0 | 0.5038864829323508 | 0.5049202092724518 |
| 35 | 3600.0 | 0.506859347309745 | 0.5088805426914307 |
| 36 | 3700.0 | 0.5144848534075093 | 0.5192572482220539 |
| 37 | 3800.0 | 0.5279784759917816 | 0.5386261011098886 |
| 38 | 3900.0 | 0.5600498413182716 | 0.5838800122432674 |
| 39 | 4000.0 | 0.6082951172137685 | 0.6580820419792784 |
| 40 | 4100.0 | 0.6482004942183983 | 0.7186023202588253 |
| 41 | 4200.0 | 0.639038010185055 | 0.726680748537874 |
| 42 | 4300.0 | 0.6377379729358209 | 0.7306801896811859 |

| | | | |
|----|--------|--------------------|--------------------|
| 43 | 4400.0 | 0.6634386414597309 | 0.756109163358614 |
| 44 | 4500.0 | 0.6419012596224846 | 0.7428832894574733 |
| 45 | 4600.0 | 0.6720195091660021 | 0.7702661631058674 |
| 46 | 4700.0 | 0.674827694064791 | 0.7774996960981436 |
| 47 | 4800.0 | 0.6844286176957454 | 0.757714726265817 |
| 48 | 4900.0 | 0.6611554426068231 | 0.7658592712458963 |
| 49 | 5000.0 | 0.6732140811538811 | 0.7743348703755961 |
| 50 | 5100.0 | 0.6453573134182371 | 0.7575321409830578 |
| 51 | 5200.0 | 0.6681599321771482 | 0.7744369436062334 |
| 52 | 5300.0 | 0.6634687105718605 | 0.7749380738040733 |
| 53 | 5400.0 | 0.6669951571110547 | 0.7788858077521669 |
| 54 | 5500.0 | 0.6728382660737033 | 0.7825138644075128 |
| 55 | 5600.0 | 0.6666664727250459 | 0.7791350794634704 |
| 56 | 5700.0 | 0.6742517784692412 | 0.7846595891552643 |
| 57 | 5800.0 | 0.6681361657836509 | 0.7806455368013683 |
| 58 | 5900.0 | 0.6765254195526409 | 0.7875572728314515 |
| 59 | 6000.0 | 0.6778228829469396 | 0.7890899389263429 |
| 60 | 6100.0 | 0.6694922166373283 | 0.7832742595495673 |
| 61 | 6200.0 | 0.6796982519506364 | 0.7901324624254442 |
| 62 | 6300.0 | 0.6760706825221784 | 0.7880121807883975 |
| 63 | 6400.0 | 0.6833319587672956 | 0.7926488391543585 |
| 64 | 6500.0 | 0.6772908208162105 | 0.7895229247593923 |
| 65 | 6600.0 | 0.6751453266587368 | 0.7884574033776108 |
| 66 | 6700.0 | 0.6834242984053952 | 0.793953900876868 |
| 67 | 6800.0 | 0.697970871333448 | 0.801506081405951 |
| 68 | 6900.0 | 0.67592212650503 | 0.7879403349641082 |
| 69 | 7000.0 | 0.6789406940894558 | 0.7904230234574299 |
| 70 | 7100.0 | 0.6835562012700364 | 0.794148606139344 |
| 71 | 7200.0 | 0.6921270169436986 | 0.7999588359485973 |
| 72 | 7300.0 | 0.6878616914256611 | 0.7966981863046622 |
| 73 | 7400.0 | 0.6789996436051968 | 0.7909035762298527 |
| 74 | 7500.0 | 0.6822158565192884 | 0.792723965335202 |
| 75 | 7600.0 | 0.6979784203670205 | 0.8040286366705107 |

| | | | |
|----|--------|--------------------|--------------------|
| 76 | 7700.0 | 0.6946300315338476 | 0.8027324534966463 |
| 77 | 7800.0 | 0.6921982824244336 | 0.7985443051538131 |
| 78 | 7900.0 | 0.6917778200629398 | 0.8021367945343754 |
| 79 | 8000.0 | 0.6936198407089339 | 0.8012907456378547 |
| 80 | 8100.0 | 0.6931236601783156 | 0.8008187033913352 |
| 81 | 8200.0 | 0.6997238431081999 | 0.803921414660169 |

metadata

| | epoch | lr_change_ratio | batch_mean_epsilon | batch_valid_ratio | batch_mean_grad_norm | batch_mean_grad_norm | batch_mean_grad_norm |
|----|--------|-----------------|--------------------|-------------------|----------------------|----------------------|----------------------|
| 0 | 100.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 1 | 200.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 2 | 300.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 3 | 400.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 4 | 500.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 5 | 600.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 6 | 700.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 7 | 800.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 8 | 900.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 9 | 1000.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 10 | 1100.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 11 | 1200.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 12 | 1300.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 13 | 1400.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 14 | 1500.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 15 | 1600.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 16 | 1700.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 17 | 1800.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 18 | 1900.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 19 | 2000.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 20 | 2100.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 21 | 2200.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 22 | 2300.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 23 | 2400.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |

| | | | | | | | |
|----|--------|-----|------|----------|------|------|--|
| 24 | 2500.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 25 | 2600.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 26 | 2700.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 27 | 2800.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 28 | 2900.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 29 | 3000.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 30 | 3100.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 31 | 3200.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 32 | 3300.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 33 | 3400.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 34 | 3500.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 35 | 3600.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 36 | 3700.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 37 | 3800.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 38 | 3900.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 39 | 4000.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 40 | 4100.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 41 | 4200.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 42 | 4300.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 43 | 4400.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 44 | 4500.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 45 | 4600.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 46 | 4700.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 47 | 4800.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 48 | 4900.0 | 1.0 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 49 | 5000.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 50 | 5100.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 51 | 5200.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 52 | 5300.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 53 | 5400.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 54 | 5500.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 55 | 5600.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 56 | 5700.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 57 | 5800.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |

| | | | | | | | |
|----|--------|-----|------|----------|------|------|--|
| 58 | 5900.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 59 | 6000.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 60 | 6100.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 61 | 6200.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 62 | 6300.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 63 | 6400.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 64 | 6500.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 65 | 6600.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 66 | 6700.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 67 | 6800.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 68 | 6900.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 69 | 7000.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 70 | 7100.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 71 | 7200.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 72 | 7300.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 73 | 7400.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 74 | 7500.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 75 | 7600.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 76 | 7700.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 77 | 7800.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 78 | 7900.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 79 | 8000.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 80 | 8100.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |
| 81 | 8200.0 | 0.1 | -1.0 | -0.03125 | -1.0 | -1.0 | |