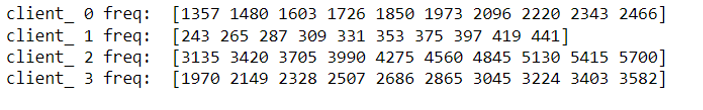
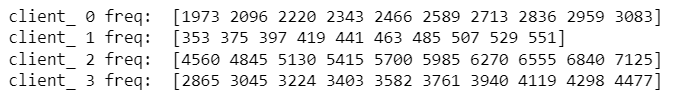
Client frequencies:



|  |  |  |
| --- | --- | --- |
|  | Accuracy | Loss |
| Norm |  |  |
| Gamma |  |  |
| Lognorm |  |  |
| Beta |  |  |
| Burr |  |  |

**NON\_IID DISTRIBUTIONS (4 clients : gender-income)**

|  |  |  |  |
| --- | --- | --- | --- |
| Distribution | frequency | accuracy | Loss |
| Gamma |  |  |  |
| Norm |  |  |  |
| Lognorm |  |  |  |
| Beta |  |  |  |
| Burr |  |  |  |

**Single-Batch Distributions**

**client\_ 0**

loss: [0.04675943 0.22334448 0.3253662 0.3327828 0.32753864 0.30964363 0.30064547 0.2881389 0.30844659 0.29107651]

freq: [7895 7895 7895 7895 7895 7895 7895 7895 7895 7895]

acc [0.99366689 0.91247624 0.87321091 0.86865103 0.87473083 0.8781507 0.88081062 0.88777709 0.87941736 0.88448387]

**client\_ 1**

loss: [0.44730943 1.00544584 1.24900603 1.09015918 1.2009567 1.20884359 1.11642206 1.12442636 1.07541847 1.10691833]

freq: [1435 1435 1435 1435 1435 1435 1435 1435 1435 1435]

acc [0.89128917 0.49756098 0.37770036 0.50522649 0.44808361 0.43135887 0.47804877 0.47456446 0.50662023 0.48989546]

**client\_ 2**

loss: [0.03972216 0.02067855 0.01909248 0.02059607 0.02184644 0.02210405 0.0240159 0.02484704 0.02478325 0.02511534]

freq: [18259 18259 18259 18259 18259 18259 18259 18259 18259 18259]

acc [0.99611151 0.99989045 1. 1. 1. 0.99994522 0.99994522 0.99989045 0.99989045 0.99994522]

**client\_ 3**

loss: [0.10719391 0.02389912 0.0262641 0.02447494 0.02615622 0.02859946 0.0283988 0.02978892 0.03104771 0.03117665]

freq: [11484 11484 11484 11484 11484 11484 11484 11484 11484 11484]

acc [0.98885405 0.99965167 0.99982584 0.99991292 0.99991292 0.99991292 0.99982584 0.99982584 0.99973875 0.99973875]

|  |  |  |
| --- | --- | --- |
| Distribution | Accuracy | Loss |
| Gamma | 0 and 1 5052963785.6386385  0 and 2 110213288418.12776  0 and 3 107785490295.07877  1 and 2 105160324655.85822  1 and 3 102732526518.81839  2 and 3 2427798137.039818  0 and global: 2170527.9642331777  1 and global: 5050793767.680869  2 and global: 110211118394.07294  3 and global: 107783320275.70663 | 0 and 1 9.308714649162779  0 and 2 11341.601002166437  0 and 3 4854633.798060776  1 and 2 11337.843632987884  1 and 3 4854630.040691596  2 and 3 4843350.173976158  0 and global: 6.269837293033752  1 and global: 13.414506742209406  2 and global: 11335.51733712475  3 and global: 4854628.48416662 |
| Norm | 0 and 1 6.675711374677921  0 and 2 286.15857542033956  0 and 3 94.18641588484508  1 and 2 292.8342867950175  1 and 3 100.86212725952299  2 and 3 191.97215953549448  0 and global: 1091.4961367516255  1 and global: 1098.1718481263035  2 and global: 805.337561331286  3 and global: 997.3097208667805 | 0 and 1 2.4057410423621155  0 and 2 54.555577640223106  0 and 3 10.220130044593963  1 and 2 56.96131868258523  1 and 3 12.62587108695608  2 and 3 44.33544759562915  0 and global: 6.002736887598183  1 and global: 8.408477929960299  2 and global: 49.369079300209755  3 and global: 5.281169731086335 |
| Lognorm | 0 and 1 20.848571350665924  0 and 2 68.43472489365098  0 and 3 78.13086556288947  1 and 2 89.2832962443169  1 and 3 98.97943691355539  2 and 3 84.68423389603093  0 and global: 1078.2990797532764  1 and global: 1099.1476511039423  2 and global: 1015.7192759065204  3 and global: 1000.1682141903868 | 0 and 1 2.396580615537854  0 and 2 88.29790770059965  0 and 3 79.39303651314505  1 and 2 90.69448831613751  1 and 3 81.7896171286829  2 and 3 32.77755483496762  0 and global: 6.029857038491165  1 and global: 8.426437654029018  2 and global: 82.74258355514098  3 and global: 74.39622381424006 |
| Beta | 0 and 1 1521748664975.6758  0 and 2 210969340692530.25  0 and 3 30110798953388.42  1 and 2 212491089357505.84  1 and 3 31632547618362.84  2 and 3 180858541739143.1  0 and global: 308744075720725.44  1 and global: 310265824385701.06  2 and global: 385995910701328.75  3 and global: 325709730121620.6 | 0 and 1 2314866766485.9023  0 and 2 10624594890126.223  0 and 3 4839861950005.761  1 and 2 12939461656612.125  1 and 3 7154728716486.841  2 and 3 5784732940125.554  0 and global: 4391291160872.917  1 and global: 2076424394391.9973  2 and global: 15015886050987.99  3 and global: 9231153110878.678 |
| Burr | 0 and 1 12.557451473326129  0 and 2 73.81034375812625  0 and 3 58.98077024145226  1 and 2 86.36779523145239  1 and 3 71.5382217147784  2 and 3 14.82957351667399  0 and global: 37.68286544026416  1 and global: 50.24031691359029  2 and global: 36.12747831786209  3 and global: 30.816360768026254 | 0 and 1 5.9800054838741215  0 and 2 85.11174054509708  0 and 3 14009025718706.021  1 and 2 91.09174602897119  1 and 3 14009025718712.0  2 and 3 14009025718739.184  0 and global: 2.2096049476649746  1 and global: 7.564232292959562  2 and global: 83.77601115000714  3 and global: 14009025718705.12 |

**NON\_IID DISTRIBUTIONS (8 clients : gender-race(white/black)-income)**

client\_ 0 freq: [ 20 39 58 77 97 116 135 154 173 193]

client\_ 1 freq: [ 2 3 5 6 8 9 10 12 13 15]

client\_ 2 freq: [ 144 287 431 574 718 861 1005 1148 1291 1435]

client\_ 3 freq: [ 27 54 81 107 134 161 188 214 241 268]

client\_ 4 freq: [ 2 3 5 6 8 9 10 12 13 15]

client\_ 5 freq: [ 144 287 431 574 718 861 1005 1148 1291 1435]

client\_ 6 freq: [ 27 54 81 107 134 161 188 214 241 268]

client\_ 7 freq: [ 27 54 81 107 134 161 188 214 241 268]

|  |  |  |  |
| --- | --- | --- | --- |
| Distribution | frequency | accuracy | Loss |
| Gamma | 0 and 1 0.060070629175055255  0 and 2 0.004149363344507472  0 and 3 0.0013511973295201305  0 and 4 0.060070629175055255  0 and 5 0.004149363344507472  0 and 6 0.0013511973295201305  0 and 7 0.0013511973295201305  1 and 2 0.06421999251956272  1 and 3 0.06142182650457538  1 and 4 0.0  1 and 5 0.06421999251956272  1 and 6 0.06142182650457538  1 and 7 0.06142182650457538  2 and 3 0.002798166014987343  2 and 4 0.06421999251956272  2 and 5 0.0  2 and 6 0.002798166014987343  2 and 7 0.002798166014987343  3 and 4 0.06142182650457538  3 and 5 0.002798166014987343  3 and 6 0.0  3 and 7 0.0  4 and 5 0.06421999251956272  4 and 6 0.06142182650457538  4 and 7 0.06142182650457538  5 and 6 0.002798166014987343  5 and 7 0.002798166014987343  6 and 7 0.0  0 and global: 0.004554221234085876  1 and global: 0.06462485040914114  2 and global: 0.000404857889578405  3 and global: 0.003203023904565748  4 and global: 0.06462485040914114  5 and global: 0.000404857889578405  6 and global: 0.003203023904565748  7 and global: 0.003203023904565748 | 0 and 1 1.1086612543426392e+24  0 and 2 71105.23308279332  0 and 3 64435.1487504472  0 and 4 7.290130207078613e+25  0 and 5 82004.49655340843  0 and 6 94069.37085582869  0 and 7 3701.1612710988925  1 and 2 1.1086612543426392e+24  1 and 3 1.1086612543426392e+24  1 and 4 7.17926408164435e+25  1 and 5 1.1086612543426392e+24  1 and 6 1.1086612543426392e+24  1 and 7 1.1086612543426392e+24  2 and 3 6670.481485143623  2 and 4 7.290130207078613e+25  2 and 5 10899.270813394027  2 and 6 22964.25169765005  2 and 7 74779.2231638531  3 and 4 7.290130207078613e+25  3 and 5 17569.75229853765  3 and 6 29634.22346391982  3 and 7 68108.78739753748  4 and 5 7.290130207078613e+25  4 and 6 7.290130207078613e+25  4 and 7 7.290130207078613e+25  5 and 6 12064.990291189548  5 and 7 85678.49397724713  6 and 7 97743.0108614573  0 and global: 297976.9979743444  1 and global: 1.1086612543426392e+24  2 and global: 226872.7648010641  3 and global: 233543.24628620775  4 and global: 7.290130207078613e+25  5 and global: 215973.4939876701  6 and global: 203909.03660293182  7 and global: 301651.9879649172 | 0 and 1 0.10370943321177582  0 and 2 4010091.851041004  0 and 3 1546403.887152391  0 and 4 0.10433427298681279  0 and 5 56605722.14149832  0 and 6 12291749.25598789  0 and 7 6599176074.937812  1 and 2 4010091.9488191605  1 and 3 1546403.9849305477  1 and 4 0.0013789201741964355  1 and 5 56605722.239276476  1 and 6 12291749.353766046  1 and 7 6599176075.03559  2 and 3 2463687.9669454126  2 and 4 4010091.949681644  2 and 5 52595630.41933119  2 and 6 8281661.6103856  2 and 7 6595165985.794641  3 and 4 1546403.985793031  3 and 5 55059318.268200174  3 and 6 10745345.431027211  3 and 7 6597629671.435245  4 and 5 56605722.240138955  4 and 6 12291749.35462853  4 and 7 6599176075.036452  5 and 6 44313972.89276807  5 and 7 6542570356.7310295  6 and 7 6586884326.013906  0 and global: 1.4285708133133204  1 and global: 1.5322802465250962  2 and global: 4010090.7213942762  3 and global: 1546402.7813941247  4 and global: 1.5329050863001332  5 and global: 56605721.02613207  6 and global: 12291748.176275602  7 and global: 6599176073.941712 |
| Norm | 0 and 1 0.06007122684578516  0 and 2 0.004149344348075922  0 and 3 0.0013511997390750364  0 and 4 0.06007122684578516  0 and 5 0.004149344348075922  0 and 6 0.0013511997390750364  0 and 7 0.0013511997390750364  1 and 2 0.06422057119386108  1 and 3 0.06142242658486019  1 and 4 0.0  1 and 5 0.06422057119386108  1 and 6 0.06142242658486019  1 and 7 0.06142242658486019  2 and 3 0.002798144609000886  2 and 4 0.06422057119386108  2 and 5 0.0  2 and 6 0.002798144609000886  2 and 7 0.002798144609000886  3 and 4 0.06142242658486019  3 and 5 0.002798144609000886  3 and 6 0.0  3 and 7 0.0  4 and 5 0.06422057119386108  4 and 6 0.06142242658486019  4 and 7 0.06142242658486019  5 and 6 0.002798144609000886  5 and 7 0.002798144609000886  6 and 7 0.0  0 and global: 0.0045542126780806136  1 and global: 0.06462543952386578  2 and global: 0.0004048683300046911  3 and global: 0.003203012939005577  4 and global: 0.06462543952386578  5 and global: 0.0004048683300046911  6 and global: 0.003203012939005577  7 and global: 0.003203012939005577 | 0 and 1 0.2120918774216982  0 and 2 2.083455323327093  0 and 3 0.4186697767478784  0 and 4 0.22520613686580915  0 and 5 2.126833513588227  0 and 6 0.42755079621031844  0 and 7 0.4304186042738239  1 and 2 1.87230111569839  1 and 3 0.2075155691191755  1 and 4 0.013497105938968886  1 and 5 1.9156793059595236  1 and 6 0.21639658858161548  1 and 7 0.21926439664512104  2 and 3 1.6689748310649373  2 and 4 1.8588040097594212  2 and 5 0.043495549402412736  2 and 6 1.660146067455079  2 and 7 1.6572830707436552  3 and 4 0.1940184631802066  3 and 5 1.7124703804673502  3 and 6 0.008881019462439962  3 and 7 0.01174882752594549  4 and 5 1.9021822000205548  4 and 6 0.20289948264264662  4 and 7 0.20576729070615213  5 and 6 1.703641616857492  5 and 7 1.7007786201460682  6 and 7 0.0028678080635055293  0 and global: 7.33227062129683  1 and global: 7.120178743875132  2 and global: 5.249625763724158  3 and global: 6.918600594789096  4 and global: 7.107064484431021  5 and global: 5.206130214321746  6 and global: 6.9097718311792375  7 and global: 6.906908834467814 | 0 and 1 0.10673834724403883  0 and 2 1.380199654329676  0 and 3 0.9940758463410928  0 and 4 0.1066723190793967  0 and 5 1.3865831281400822  0 and 6 0.9941117930902268  0 and 7 0.9918085825007515  1 and 2 1.481643172934903  1 and 3 1.09551936494632  1 and 4 0.000216711417305436  1 and 5 1.4880266467453094  1 and 6 1.095555311695454  1 and 7 1.0932521011059786  2 and 3 0.386123807988583  2 and 4 1.4815801279492307  2 and 5 0.006383473810406449  2 and 6 0.3860878612394491  2 and 7 0.38839107182892435  3 and 4 1.0954563199606473  3 and 5 0.39250728179898947  3 and 6 0.0005367686971908814  3 and 7 0.0022672638403413476  4 and 5 1.4879636017596367  4 and 6 1.095492266709781  4 and 7 1.0931890561203057  5 and 6 0.3924713350498556  5 and 7 0.39477454563933084  6 and 7 0.002303210589475267  0 and global: 1.4272442497984321  1 and global: 1.5339825970424708  2 and global: 0.3652357969415416  3 and global: 0.4660649404007512  4 and global: 1.5339165688778287  5 and global: 0.36830371566632125  6 and global: 0.4660335161887579  7 and global: 0.46753058838751227 |
| Lognorm | 0 and 1 0.06005760556573089  0 and 2 277292932.92018044  0 and 3 0.0013481824468570065  0 and 4 0.06005760556573089  0 and 5 277292932.92018044  0 and 6 0.0013481824468570065  0 and 7 0.0013481824468570065  1 and 2 277292932.96221083  1 and 3 0.06140578801258789  1 and 4 0.0  1 and 5 277292932.96221083  1 and 6 0.06140578801258789  1 and 7 0.06140578801258789  2 and 3 277292932.9192346  2 and 4 277292932.96221083  2 and 5 0.0  2 and 6 277292932.9192346  2 and 7 277292932.9192346  3 and 4 0.06140578801258789  3 and 5 277292932.9192346  3 and 6 0.0  3 and 7 0.0  4 and 5 277292932.96221083  4 and 6 0.06140578801258789  4 and 7 0.06140578801258789  5 and 6 277292932.9192346  5 and 7 277292932.9192346  6 and 7 0.0  0 and global: 879.6318256815373  1 and global: 879.6738560809152  2 and global: 277292053.288431  3 and global: 879.6308797800148  4 and global: 879.6738560809152  5 and global: 277292053.288431  6 and global: 879.6308797800148  7 and global: 879.6308797800148 | 0 and 1 136052570759.68797  0 and 2 136049252022.25606  0 and 3 136049252023.49529  0 and 4 136052613834.89775  0 and 5 136049252022.23308  0 and 6 136049252023.48358  0 and 7 136049252023.47874  1 and 2 4646281.706299077  1 and 3 4646282.6346056815  1 and 4 60305.293719564266  1 and 5 4646281.68343982  1 and 6 4646282.625588187  1 and 7 4646282.62239414  2 and 3 1.6648294004410842  2 and 4 4706587.0000186395  2 and 5 0.041380356326612765  2 and 6 1.6502568358270895  2 and 7 1.6436558539373416  3 and 4 4706587.928325245  3 and 5 1.706209756767697  3 and 6 0.01476383406909202  3 and 7 0.021474327080365313  4 and 5 4706586.977159383  4 and 6 4706587.919307751  4 and 7 4706587.9161137035  5 and 6 1.6916371921537026  5 and 7 1.6850362102639547  6 and 7 0.006710493011273291  0 and global: 136049252019.28818  1 and global: 4646278.745104295  2 and global: 5.291769628975244  3 and global: 6.956599029416328  4 and global: 4706584.038823858  5 and global: 5.25038927264863  6 and global: 6.942026464802333  7 and global: 6.935425482912585 | 0 and 1 0.10693360673000937  0 and 2 18078.08070624799  0 and 3 396429932.01335263  0 and 4 0.10673795477597588  0 and 5 3654423980.56018  0 and 6 34150.128164832444  0 and 7 3063532541.261385  1 and 2 18078.178362300816  1 and 3 396429932.10379016  1 and 4 0.0006758982822177532  1 and 5 3654423980.6540914  1 and 6 34150.218602356945  1 and 7 3063532541.347425  2 and 3 396411859.9474494  2 and 4 18078.1780593311  2 and 5 3654405906.9194674  2 and 6 16074.949135666597  2 and 7 3063514469.401654  3 and 4 396429932.1033487  3 and 5 3257994048.5552373  3 and 6 396395785.00112915  3 and 7 2667102609.454204  4 and 5 3654423980.653788  4 and 6 34150.21816088371  4 and 7 3063532541.3469834  5 and 6 3654389832.0148063  5 and 7 590891439.3153129  6 and 7 3063498394.4528565  0 and global: 1.4259679749954903  1 and global: 1.5329015817254994  2 and global: 18077.251829285244  3 and global: 396429931.4055713  4 and global: 1.5327059297714662  5 and global: 3654423979.8410144  6 and global: 34149.4422483637  7 and global: 3063532540.6762013 |
| Beta | 0 and 1 237.82440007983263  0 and 2 0.029280586421994704  0 and 3 9.234096878597615  0 and 4 237.82440007983263  0 and 5 0.029280586421994704  0 and 6 9.234096878597615  0 and 7 9.234096878597615  1 and 2 237.85368066625458  1 and 3 228.59343422794328  1 and 4 0.0  1 and 5 237.85368066625458  1 and 6 228.59343422794328  1 and 7 228.59343422794328  2 and 3 9.260246438311304  2 and 4 237.85368066625458  2 and 5 0.0  2 and 6 9.260246438311304  2 and 7 9.260246438311304  3 and 4 228.59343422794328  3 and 5 9.260246438311304  3 and 6 0.0  3 and 7 0.0  4 and 5 237.85368066625458  4 and 6 228.59343422794328  4 and 7 228.59343422794328  5 and 6 9.260246438311304  5 and 7 9.260246438311304  6 and 7 0.0  0 and global: 0.030364586522496288  1 and global: 237.8547646663551  2 and global: 0.0010840001005015807  3 and global: 9.261330438411806  4 and global: 237.8547646663551  5 and global: 0.0010840001005015807  6 and global: 9.261330438411806  7 and global: 9.261330438411806 | 0 and 1 17165610009027.395  0 and 2 32112801924152.258  0 and 3 24630492716460.13  0 and 4 5.470130100308359e+24  0 and 5 40861287911002.43  0 and 6 22857730657881.29  0 and 7 22201528512974.766  1 and 2 29660613406464.625  1 and 3 17273830368350.904  1 and 4 5.470130100291193e+24  1 and 5 33504625562892.355  1 and 6 15501068309772.764  1 and 7 14844866164866.338  2 and 3 17334525653271.008  2 and 4 5.470130100276247e+24  2 and 5 8748485986850.175  2 and 6 18398182888418.105  2 and 7 18791904175361.99  3 and 4 5.470130100283729e+24  3 and 5 16230795194542.807  3 and 6 1772762058578.8757  3 and 7 2428964203485.3984  4 and 5 5.470130100267498e+24  4 and 6 5.470130100285502e+24  4 and 7 5.470130100286158e+24  5 and 6 18003557253121.312  5 and 7 18659759398027.78  6 and 7 656202144906.5271  0 and global: 977185598628.7579  1 and global: 16188424410403.002  2 and global: 31135616325525.04  3 and global: 23653307117834.3  4 and global: 5.470130100307382e+24  5 and global: 39884102312375.09  6 and global: 21880545059255.465  7 and global: 21224342914348.938 | 0 and 1 2266722.893849632  0 and 2 803025.1788703941  0 and 3 23964014297.84022  0 and 4 2256090.9439239977  0 and 5 808564.3717428442  0 and 6 400558421948.7791  0 and 7 779389.9601179375  1 and 2 3069748.0727200266  1 and 3 23961747575.205105  1 and 4 10631.953459427701  1 and 5 3075287.2655924764  1 and 6 400556155226.144  1 and 7 3046112.85396757  2 and 3 23964817321.26088  2 and 4 3059116.1227943925  2 and 5 5539.23855129339  2 and 6 400559224972.41876  2 and 7 23635.218752456767  3 and 4 23961758207.15856  3 and 5 23964822860.499428  3 and 6 376594407655.1014  3 and 7 23964793686.388474  4 and 5 3064655.3156668423  4 and 6 400556165858.0975  4 and 7 3035480.9040419357  5 and 6 400559230511.6446  5 and 7 29174.411624906734  6 and 7 400559201337.40656  0 and global: 310078.91876134736  1 and global: 1956648.6119356353  2 and global: 1113102.3394170266  3 and global: 23963704219.349495  4 and global: 1946016.6620100013  5 and global: 1118641.5779683199  6 and global: 400558111871.5425  7 and global: 1089467.4670115337 |
| Burr | 0 and 1 nan  0 and 2 nan  0 and 3 nan  0 and 4 nan  0 and 5 nan  0 and 6 nan  0 and 7 nan  1 and 2 nan  1 and 3 nan  1 and 4 nan  1 and 5 nan  1 and 6 nan  1 and 7 nan  2 and 3 0.003143242360355302  2 and 4 nan  2 and 5 0.0  2 and 6 0.003143242360355302  2 and 7 0.003143242360355302  3 and 4 nan  3 and 5 0.003143242360355302  3 and 6 0.0  3 and 7 0.0  4 and 5 nan  4 and 6 nan  4 and 7 nan  5 and 6 0.003143242360355302  5 and 7 0.003143242360355302  6 and 7 0.0  0 and global: nan  1 and global: nan  2 and global: 0.0004337501381282748  3 and global: 0.003576992498483577  4 and global: nan  5 and global: 0.0004337501381282748  6 and global: 0.003576992498483577  7 and global: 0.003576992498483577 | 0 and 1 1.3510894916043246e+18  0 and 2 616291619683036.2  0 and 3 616291619683039.5  0 and 4 1.3510894916043246e+18  0 and 5 616291619683035.8  0 and 6 616291619683039.4  0 and 7 616291619683039.4  1 and 2 1.3517057832240077e+18  1 and 3 1.3517057832240077e+18  1 and 4 0.0004754295375376583  1 and 5 1.3517057832240077e+18  1 and 6 1.3517057832240077e+18  1 and 7 1.3517057832240077e+18  2 and 3 5.8835228547409715  2 and 4 1.3517057832240077e+18  2 and 5 1.2159821403087072  2 and 6 5.803818213439163  2 and 7 5.737656934686064  3 and 4 1.3517057832240077e+18  3 and 5 7.099153847589226  3 and 6 0.09567118691830748  3 and 7 0.14594398897780564  4 and 5 1.3517057832240077e+18  4 and 6 1.3517057832240077e+18  4 and 7 1.3517057832240077e+18  5 and 6 7.019449206287417  5 and 7 6.953287927534317  6 and 7 0.06618744306223928  0 and global: 616291619683045.0  1 and global: 1.3517057832240077e+18  2 and global: 35.718736046063356  3 and global: 41.601764941961804  4 and global: 1.3517057832240077e+18  5 and global: 34.50275390575465  6 and global: 41.522060300659994  7 and global: 41.4558990219069 | 0 and 1 nan  0 and 2 nan  0 and 3 nan  0 and 4 nan  0 and 5 nan  0 and 6 nan  0 and 7 nan  1 and 2 nan  1 and 3 nan  1 and 4 nan  1 and 5 nan  1 and 6 nan  1 and 7 nan  2 and 3 8339111.850938806  2 and 4 nan  2 and 5 550.40966283993  2 and 6 13181097.303081887  2 and 7 55861031.07412115  3 and 4 nan  3 and 5 8338561.644158137  3 and 6 4841986.09609811  3 and 7 47521922.0175105  4 and 5 nan  4 and 6 nan  4 and 7 nan  5 and 6 13180546.893419046  5 and 7 55860480.66445831  6 and 7 42679937.47035159  0 and global: nan  1 and global: nan  2 and global: 24.69726731927567  3 and global: 8339130.779037036  4 and global: nan  5 and global: 573.5908228660169  6 and global: 13181114.382436655  7 and global: 55861051.83492022 |