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| --- |
| 4x32, lr = 0.01, batch = 30, epochs = 500    0.012956023  epoch\_no = [200]  lr = [0.0001,0.0002,0.0005,0.001,0.002]  batch\_size = [1/120,1/60,1/24,1/12,1/6,1/1]  FAILURE  lr = [0.00001,0.00002,0.00005,0.0001]  batch\_size = [1/120,1/60,1/24,1/12,1/6,1/1]  FAILURE  lr = [0.0001]  batch\_size = [1/120,1/90,1/60,1/24,1/12,1/6,1/1]  0.029  LOSS WITH THIS LEARNING RATE PLATEAUS AT END OF FIRST LEG    Architecture = [60]\*5  epoch\_no = [500]  lr = [0.001]  batch\_size = [int(len(df.index)/60)]    0.006845598 |
| Lr = 0.00001 is too low  [60]\*6 architecture is too much I think  ['bn']+[30]\*3 couldn’t get the start curve with 1E-6 reg  ['bn']+[5]\*1 and ['bn']+[10]\*1 and ['bn']+[4]\*3 too small ['bn']+[10]\*2 can’t approximate the start curve |
| **Best result so far:**  **Architecture = [60]\*5**  **epoch\_no = [300]**  **lr = [0.001]**  **batch\_size = [int(len(df.index)/120),int(len(df.index)/60)]**    0.00069529796  0.0006239303  0.0005446386979846606  0.0004132052960550437  0.0009907044842914503  hidden\_layers = [60]\*5  reg = [['l2',1E-6]]  epoch\_no = [300]  lr = [0.001]  batch\_size = [int(len(df.index)/120),int(len(df.index)/60)]    0.00097179477  0.00090003427  0.000911863574990817  0.000839186838057044  0.0010723273075355897  hidden\_layers = [60]\*5 reg = [['l2',1E-6]]  epoch\_no = [500]  lr = [0.001]  batch\_size = [int(len(df.index)/120),int(len(df.index)/60),int(len(df.index))]    0.0003598512  0.00028053348  0.00029984772003660294  0.00021226185147269142  0.00034353277217026 |
|  |
| hidden\_layers = ['bn']+[10]\*3  epoch\_no = [300]  lr = [0.0002,0.0005,0.001]  batch\_size = [int(len(df.index)/120),int(len(df.index)/60),int(len(df.index)/30),int(len(df.index)/10),int(len(df.index))]    0.00820136 |
| hidden\_layers = ['bn']+[5]\*3 reg = [['l2',1E-6]] epoch\_no = [300]  lr = [0.0002,0.0005,0.001]  batch\_size = [int(len(df.index)/120),int(len(df.index)/60),int(len(df.index)/30),int(len(df.index)/10),int(len(df.index))]    0.008740062 |
|  |
| No reg    1E-6 reg |
| hidden\_layers = ['bn']+[5]\*3  reg = [['l2',1E-5]]    No red bump but no initial curve, but you get the bump with 1E-4 |
| hidden\_layers = ['bn']+[20]\*3 |

Looking at different tracks with the following training setup:  
hidden\_layers = [60]\*5  
reg = [['l2',1E-6]]  
epoch\_no = [500]  
lr = [0.001]  
batch\_size = [int(len(df.index)/120),int(len(df.index)/60),int(len(df.index))]

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| **Track 0**    0.0003598512  0.00028053348  0.00029984772003660294  0.00021226185147269142  0.00034353277217026 |
| Track 1    0.00034609882  0.00034062774  0.0003647403749660655  0.0002537312453506692  0.0004107243840462615 |
| Track 2    0.00033814777  0.0002966067  0.00030976487857629453  0.00034295659671291286  0.00033993268554204195 |
| Track 3    0.00042545702  0.00044663218  0.0003592123543920142  0.000398704632103142  0.0007748334736277944 |
| Track 4    0.00032296169  0.0003276016  0.00033616929848918865  0.0003659429076718042  0.00041396161084676457 |
| Track 5    0.00042157268  0.00035530172  0.00038102033113942424  0.00039703038462371253  0.0003875914678370639 |
| Track 6    0.00029503132  0.00026845702  0.00034310742381558267  0.00025537342774429776  0.00024393338107896135 |
| Track 7    0.0003413211  0.00031453406  0.0003642522975950586  0.00035948981977418294  0.00032604352805806015 |
| Track 8:    0.00037187085  0.00037602484  0.0003819308402430599  0.0002897254507425091  0.000463843089420169 |
| Track 9:    0.0002816062  0.00026306536  0.0003098773911911001  0.0002259391625175587  0.00024966182625450766 |
| Track 10:    0.0003118118  0.00028689398  0.00032252810246015184  0.000251886247418739  0.0002730192699397294 |
| Track 11:    0.00028049905  0.00025247183  0.0003081700296755679  0.0002421058868714884  0.00022310321837993232 |
| Track 12:    0.0002897116  0.00029038845  0.0003570830305394454  0.000273978627056529  0.0002469524371587345 |
| Track 13:    0.00031223093  0.00028685466  0.00035510467351785723  0.00026551630855358945  0.00024356077437134955 |
| Track 14:    0.00028244153  0.00030233397  0.00038761770060665037  0.0002668818696096767  0.000273849384575311 |
| Track 15:    0.00027016932  0.00024936986  0.0003230972053867085  0.0002240671133296136  0.0001929414452953453 |
| Track 16:    0.0003624003  0.0003376588  0.00044667251775561893  0.0002932136617418581  0.0002897078349883698 |
| Track 17:    0.00034281908  0.00032976852  0.00041421262427434404  0.0002509764441018104  0.0003093593286740786 |
| Track 18:    0.00026856494  0.00025369204  0.0003204342772672029  0.00026658869376664315  0.00019808319630010174 |
| Track 19:    0.0002782737  0.00026628058  0.00035682116830993874  0.0002626105099921678  0.00021207812268118765 |
| Track 20:    0.00035348168  0.00032748163  0.0004297743098478746  0.00026452430155076784  0.0002934458374272587 |
| Track 21:    0.00035499234  0.00034461703  0.00044995821541381816  0.0002626177208312622  0.0003057217783311422 |
| Track 22:    0.0010662145  0.0011511715  0.0014000519651260705  0.0006189881386949582  0.0012379214282971218 |
| Track 23:    0.0003527883  0.00034405128  0.0004409409417733871  0.0002661947270978196  0.00032073484963874834 |
| Track 24:    0.00040158772  0.00040207425  0.0005397609644687722  0.00024154100107274086  0.0003666864799910941 |
| Track 25:    0.000498604  0.0004811871  0.0008279750549771388  0.00033945224623806267  3.965539815183373e-05 |
|  |
| 22 currently the worst |
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