参数范围

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 模型 | lr/ alpha | 特殊参数 | dropout/l1 | l2 |
| WideDeep | lr (5e-4 1e-3 2e-3) | dnn-hidden-units (256 128,256 128 64,256 128 64 32) | dropout (0.3 0.5 0.7) | l2 (1e-6 1e-5 1e-4) |
| DeepFM |  | embed-dim (8,16,32) |  |  |
| DCN |  | cross-num (1,2,3) |  |  |
| DIN |  | attention-hidden-size (32,64,128) |  |  |
| DMR |  | memory-hops (1,2) |  |  |
| CTNet |  | conv-layers (2,3,4) |  |  |
| FFM |  | embed-dim (4,8,16) |  |  |
| FTRL | alpha (0.01,0.05,0.1) | beta (0.5 1.0 2.0) | l1 (0.1 1.0 10.0) | l2 (1e-6 1e-5 1e-4) |

调优结果

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 模型 | lr/ alpha | 特殊参数 | dropout/l1 | l2 |
| WideDeep | 0.001 | dnn-hidden-units 256 128 64 | dropout 0.3 | l2 1e-6 |
| DeepFM | 0.002 | embed-dim 8 | dropout 0.5 | l2 1e-4 |
| DCN | 0.001 | cross-num 2 | dropout 0.5 | l2 1e-6 |
| DIN | 0.0005 | attention-hidden-size 64 | dropout 0.5 | l2 1e-6 |
| DMR | 0.001 | memory-hops 2 | dropout 0.5 | l2 1e-6 |
| CTNet | 0.0005 | conv-layers 3 | dropout 0.3 | l2 1e-6 |
| FFM | - | embed-dim 8 | - | - |
| FTRL | alpha 0.05 | beta 2.0 | l1 0.1 | l2 1e-6 |

注：DCN 使用固定的dnn-hidden-units 256 128 64

最优超参数下的最终结果-模型横向对比

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 模型 | lr | Val AUC | Test AUC | Val LogLoss | Test LogLoss |
| CTNet | 0.0005 | 0.973633 | 0.971602 | 0.010674 | 0.010801 |
| DMR | 0.0010 | 0.973850 | 0.972078 | 0.010678 | 0.010803 |
| DIN | 0.0005 | 0.974084 | 0.972173 | 0.010622 | 0.010744 |
| DCN | 0.0010 | 0.973487 | 0.971544 | 0.010707 | 0.010849 |
| DeepFM | 0.0020 | 0.971985 | 0.970324 | 0.010995 | 0.011106 |
| Wide & Deep | 0.0010 | 0.973772 | 0.971802 | 0.010650 | 0.010781 |
| FTRL | α=0.05 | 0.9653086 | 0.961341 | 0.025923 | 0.025924 |