**优化器对比**

（lr=0.1 epoch=500 batch=32）

表1 loss图对比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sgd | Sgdm | Adagrad | Rmsprop(lr=0.05) | Adam |
| 0.032 | 0.031 | 0.032 | 0.023 | 0.014 |

表2 ACC图对比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sgd | Sgdm | Adagrad | Rmsprop | Adam |
| 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |

表3 训练耗时（total\_time）对比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sgd | Sgdm | Adagrad | Rmsprop | Adam |
| 5.85 | 5.45 | 5.48 | 5.78 | 7.42 |

**优化器对比**

（lr=0.01 epoch=100 batch=32）

表1 loss图对比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sgd | Sgdm | Adagrad | Rmsprop | Adam |
|  |  |  |  |  |

表2 ACC图对比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sgd | Sgdm | Adagrad | Rmsprop | Adam |
|  |  |  |  |  |

表3 训练耗时（total\_time）对比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sgd | Sgdm | Adagrad | Rmsprop | Adam |
|  |  |  |  |  |