

## Rank Selection Guidelines

**LoRA Rank Selection:  $r=1\sim 64$**

Balance between performance and efficiency

**$r=4\text{-}8$**

Simple Tasks

**$r=16\text{-}32$**

Most Tasks

**$r=64+$**

Complex Tasks



### Task Complexity Recommendations

- **$r=4$ :** Binary classification, sentiment analysis
- **$r=8$ :** Named entity recognition, simple QA
- **$r=16$ :** Medical report generation, diagnosis
- **$r=32$ :** Clinical reasoning, multi-task learning
- **$r=64$ :** Large-scale medical knowledge integration



### Experimental Approach

- Start with  $r=8$ , measure validation performance
- Double rank if performance plateaus early
- Halve rank if overfitting occurs
- Monitor training loss vs validation gap