# Backdoor Experiments: Results

- LDP and CDP can indeed mitigate backdoor attacks although they do so with different robustness vs utility trade-offs

- Weak DP and norm bounding mitigate the attack without really affecting the utility. However, in Setting 2, with more attackers, such defenses also decrease utility

- In both settings, LDP/CDP are more effective than norm bounding and weak DP in reducing backdoor accuracy, although with varying levels of utility

- In LDP, if attackers opt out, the attack is boosted

- Overall, CDP works better as it better mitigates the attack and yields better utility. However, CDP requires trust in the central server

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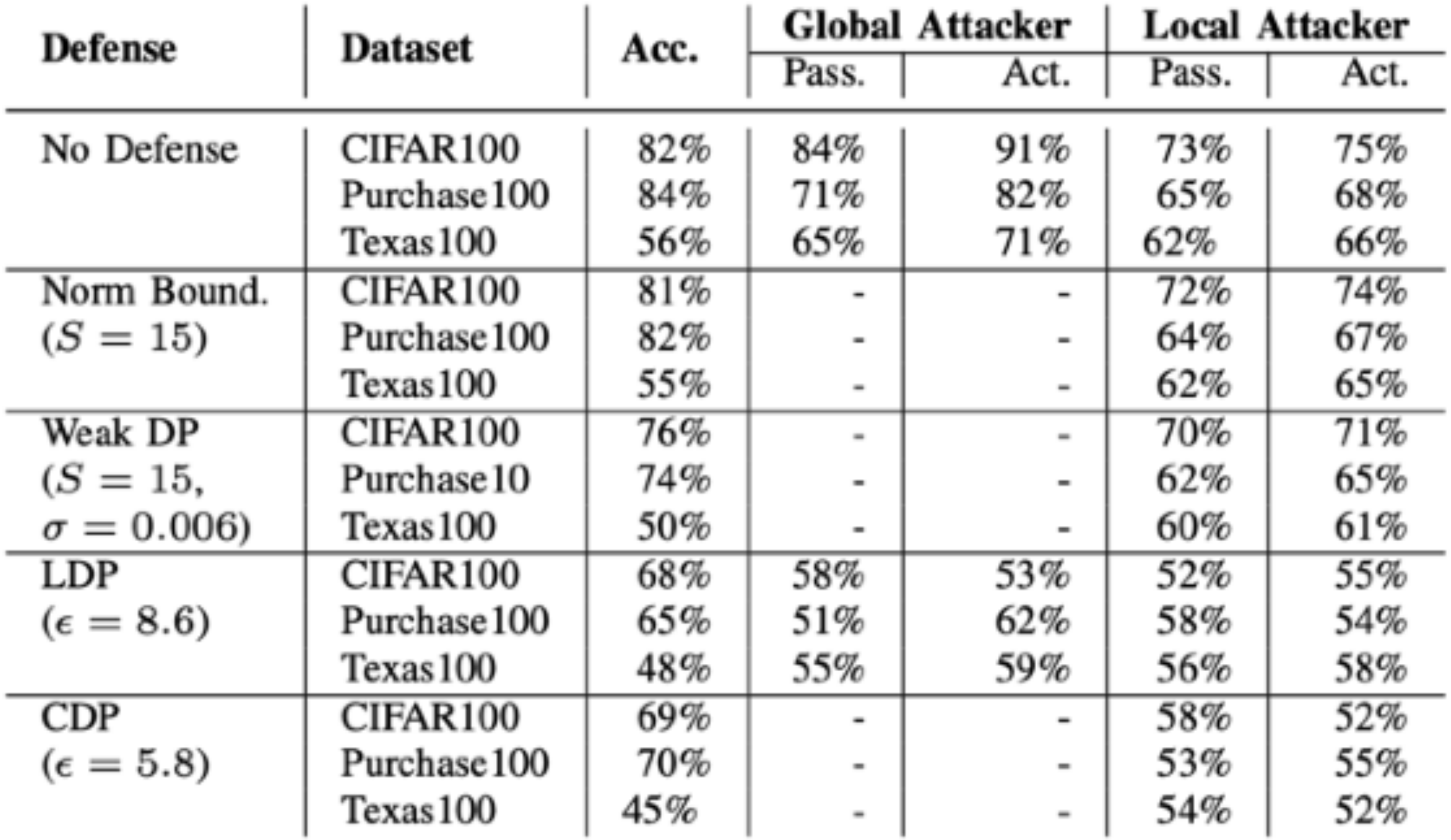
# Membership Inference: Results



| Defense | Dataset | Acc. | Global Attacker | | Local Attacker | |
|---|---|---|---|---|---|---|
| | | | Pass. | Act. | Pass. | Act. |
| No Defense | CIFAR100 | 82% | 84% | 91% | 73% | 75% |
| | Purchase100 | 84% | 71% | 82% | 65% | 68% |
| | Texas100 | 56% | 65% | 71% | 62% | 66% |
| Norm Bound. ($S = 15$) | CIFAR100 | 81% | - | - | 72% | 74% |
| | Purchase100 | 82% | - | - | 64% | 67% |
| | Texas100 | 55% | - | - | 62% | 65% |
| Weak DP ($S = 15$, $\sigma = 0.006$) | CIFAR100 | 76% | - | - | 70% | 71% |
| | Purchase10 | 74% | - | - | 62% | 65% |
| | Texas100 | 50% | - | - | 60% | 61% |
| LDP ($\epsilon = 8.6$) | CIFAR100 | 68% | 58% | 53% | 52% | 55% |
| | Purchase100 | 65% | 51% | 62% | 58% | 54% |
| | Texas100 | 48% | 55% | 59% | 56% | 58% |
| CDP ($\epsilon = 5.8$) | CIFAR100 | 69% | - | - | 58% | 52% |
| | Purchase100 | 70% | - | - | 53% | 55% |
| | Texas100 | 45% | - | - | 54% | 52% |

We measure attack accuracy as the fraction of correct membership predictions for unknown data points. (Baseline is 50%)