

# Data-use Auditing

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# Problem Definition

- Single data sample use auditing
- Multiple data samples
  - Dataset use auditing

# Methods

- Membership inference
- Backdoor
- Data marks

# Membership Inference

# Results

<i>Dataset</i>	<i>Training Accuracy</i>	<i>Testing Accuracy</i>	<i>Attack Precision</i>
Adult	0.848	0.842	0.503
MNIST	0.984	0.928	0.517
Location	1.000	0.673	0.678
Purchase (2)	0.999	0.984	0.505
Purchase (10)	0.999	0.866	0.550
Purchase (20)	1.000	0.781	0.590
Purchase (50)	1.000	0.693	0.860
Purchase (100)	0.999	0.659	0.935

# Loss-based Membership Inference

# Membership Inference

# Backdoor-based Method



# Limitations of These Methods

- No guarantee on false positive rate

# Data Marks

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