

Let MWEM(**A**): repeat until happy ...

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$$\text{score}(\mathbf{A}, \mathbf{q}) = | \mathbf{q}(\mathbf{A}) - \mathbf{q}(\mathbf{D}) |.$$

2. Use the Laplace mech to measure **q**(**A**) + noise.

3. Update guess about distribution **D**, using MW.

“Theorem”: each step decreases $KL(A \parallel D)$ by $\geq \epsilon$.

“Practice”: after few questions, most are pretty accurate.

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PINQ: Privacy Integrated Queries

Proserpio, Goldberg, McSherry

<https://arxiv.org/abs/1203.3453>

<http://www-bcf.usc.edu/~proserpi/wPINQ.html>