MEMOIZED MIDDLE-BOX MULTICASTING FOR PERFORMANCE-OPTIMIZING DEEP BLOCKCHAIN NETWORK VIA LEARNED TURBO-ENCABULATION

ISAAC SHEFF
TURBO-ENCABULATION

MOTIVATION

- Underperformance
- Inefficiencies
- Hand-Tuned
- Unaccountable
- Untrusted Hardware

Prior System A
Prior System B
MACHINE LEARNING

- Layers
- More Layers
- Deep
- 1997 Internet
TURBO-ENCABULATION

TRUSTED HARDWARE

- SGX
- TrustZone, I guess
- Leverage
- Enhanced Security
- Tamper-Evident
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SDN

- Future Networks
- Middle-Box Technology
- Microservices
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MONITORING ACCURACY

- Increased Sample Size
- Smooth out Peaks
TURBO-ENCABULATION

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MONITORING ACCURACY

- Increased Sample Size
- Smooth out Peaks

Normalized

More
TURBO-ENCABULATION

SECURITY PRESERVING BLOCKCHAIN-BASED SOLUTION

- Layers
  - More Layers
  - Deep
- 1997 Internet
EVALUATION

- Efficiency
- Generalized
- Learned Parameters
- Accountability
- Trusted Hardware
- Privacy-Preserving
- Layers

Graph showing comparison of Prior System A, Prior System B, and Our System across Evaluation criteria on a 0 to 100 scale.
TURBO-ENCABULATION

EVALUATION

- 75% Optimality
- Fully-Decentralized

Processing
Accumulator
Cluster
Management
Administration
Network