Privacy-preserving edge-assisted image retrieval and classification in IoT

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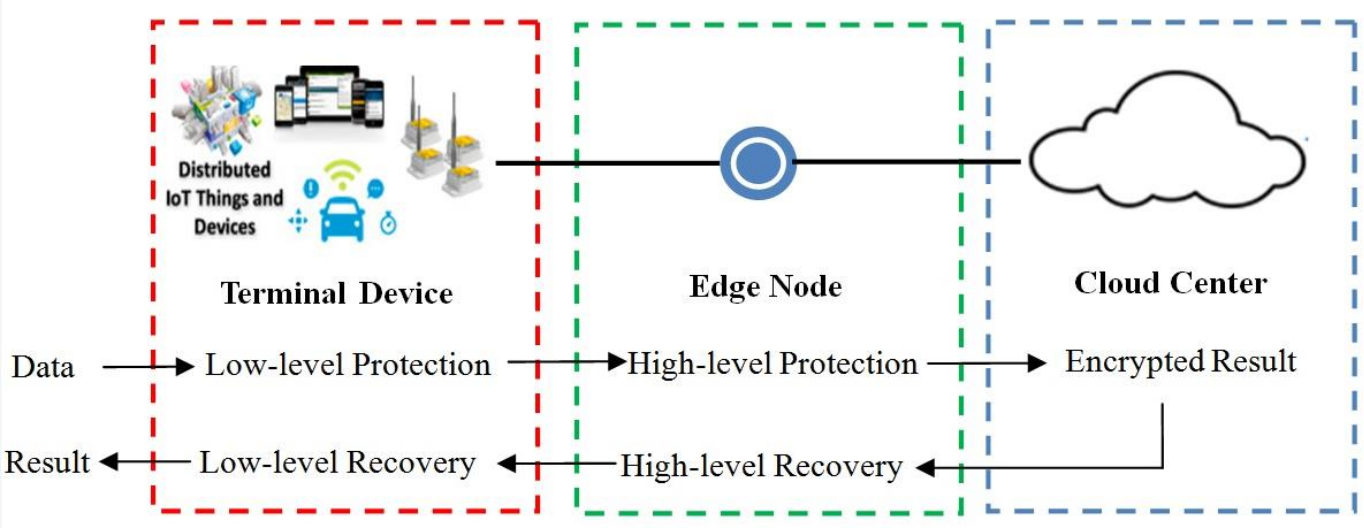
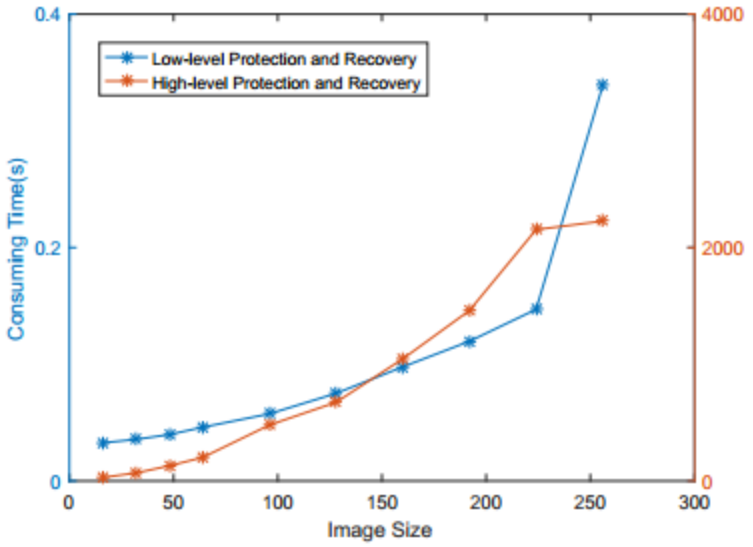
Problems & Ideas

- Problems: privacy-preserving computing solutions consume a significant amount of computation and storage resources on IoT terminal devices with limited resources.
- Ideas: Privacy-preserving edge-assisted outsourced computing
  - Add edge nodes in the privacy-preserving computing framework.
  - Propose privacy-preserving edge-assisted image retrieval and classification schemes.



Main Contributions

- **Comparison of low-level and high-level protection and recovery**



- **Reduce the overhead on the terminal device**

	Image size	32 × 32	64 × 64	128 × 128	256 × 256
Low-level	Protection	0.018s	0.022s	0.037s	0.165s
	Recovery	0.018s	0.024s	0.038s	0.174s
High-level	Protection	22.67s	67.49s	232.98s	688.80s
	Recovery	45.50s	134.90s	440.84s	1381.48s