

moco

30% fewer FLOPS in inference -> meet energy and latency constraints faster.

Problem:

Classification models must run efficiently to be deployed in **real-time embedded systems**. Achieving low energy and low latency requirements requires multiple people-months of engineering time.

Solution:

moco offers an alternative: a mathematical optimization library that analyzes the model's input data and derives rules consistent with the model's predictions. These rules can be used in lieu of inferencing the model for some data, saving unnecessary computations. This produces models that are both low-energy and low-latency.

Use Cases:

Financial: Real-time credit card fraud detection; portfolio risk classification running on high-frequency trading (HFT) systems (classify risky/safe position).

Cybersecurity: Intrusion detection for network traffic (predict malware or not).

Energy: Predictive maintenance on smart grid sensors (e.g wind turbines), battery management systems (charge/discharge prediction), fault detection.

Security (cameras, drones): real-time threat detection (does image have threat)

Defense: Threat detection on the edge (ex. Navy, submarines).

Environmental: weather event classification (e.g hurricane, flood, normal, etc.).

Interested? Contact Us!

We're looking to **validate moco on models** that are currently rate-limited or energy-limited. Schedule a consultation to see how your models can benefit.

Contact:

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