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Information technology — Artificial intelligence — Guidance on machine learning model training efficiency optimization

Technologies de l'information — Intelligence artificielle — Recommandations relatives à l'optimisation de l'efficacité de l'entraînement du modèle d'apprentissage automatique

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Machine learning (ML) is a key branch of artificial intelligence (AI). To apply ML across diverse domains, ML models are trained, validated and deployed in production environments. As model complexity and dataset size continue to grow, the time, hardware resources, human effort and financial costs associated with ML model training are escalating.

ML platforms, services and products are now widely available and adopted. Both AI providers (who offer ML platforms, services or products) and AI producers (who build ML-based solutions) seek to optimize training efficiency to minimize resource consumption and cost, without compromising model or dataset scale. For instance, AI providers aim to reduce hardware usage per training task to support more customers and improve resource utilization. AI producers prioritize faster training cycles to accelerate deployment of validated models.

This document provides guidance to help AI providers and producers achieve faster training and reduced resource consumption, given specific models, dataset and infrastructure.

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