

Additional File S2. Full electronic search strategies

Pubmed

Search: ("artificial intelligence" OR "machine learning" OR "deep learning" OR "large-scale AI" OR "foundation model*" OR "large language model*" OR LLM*) AND ("energy consumption" OR "energy footprint" OR "computational cost" OR "training cost" OR "inference cost" OR "electricity consumption") AND ("carbon footprint" OR "carbon emission*" OR "greenhouse gas emission*" OR "CO2 emission*" OR "carbon cost") AND ("climate change" OR "climate mitigation" OR "environmental sustainability") Sort by: **Publication Date**

("artificial intelligence"[All Fields] OR "machine learning"[All Fields] OR "deep learning"[All Fields] OR ("large scale"[All Fields] AND ("antagonists and inhibitors"[MeSH Subheading] OR ("antagonists"[All Fields] AND "inhibitors"[All Fields]) OR "antagonists and inhibitors"[All Fields] OR "ai"[All Fields])) OR "foundation model*" [All Fields] OR "large language model*" [All Fields] OR "llm"[All Fields]) AND ("energy consumption"[All Fields] OR "energy footprint"[All Fields] OR "computational cost"[All Fields] OR "training cost"[All Fields] OR "inference cost"[All Fields] OR "electricity consumption"[All Fields]) AND ("carbon footprint"[All Fields] OR "carbon emission*" [All Fields] OR "greenhouse gas emission*" [All Fields] OR "co2 emission*" [All Fields] OR "carbon cost"[All Fields]) AND ("climate change"[All Fields] OR "climate mitigation"[All Fields] OR "environmental sustainability"[All Fields])

Web of Science

TS=("artificial intelligence" OR "machine learning" OR "deep learning" OR "large-scale AI" OR "foundation model*" OR "large language model*" OR LLM*) AND ("energy consumption" OR "energy footprint" OR "computational cost" OR "training cost" OR "inference cost" OR "electricity consumption") AND ("carbon footprint" OR "carbon emission*" OR "greenhouse gas emission*" OR "CO2 emission*" OR "carbon cost") AND ("climate change" OR "climate mitigation" OR "environmental sustainability"))

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TITLE-ABS-KEY(("artificial intelligence" OR "machine learning" OR "deep learning" OR "large-scale AI" OR "foundation model*" OR "large language model*" OR LLM*) AND ("energy consumption" OR "energy footprint" OR "computational cost" OR "training cost" OR "inference cost" OR "electricity consumption") AND ("carbon footprint" OR "carbon emission*" OR "greenhouse gas emission*" OR "CO2 emission*" OR "carbon cost") AND ("climate change" OR "climate mitigation" OR "environmental sustainability"))