hyperref

0.1 Infinite 8 Industries CO2 Emissions using Machine Learning for Ethical Artificial Intelligence

Experiments were conducted by Infinite 8 Industries, Inc., (I8I), using a non-traditional and private infrastructure, which has a carbon efficiency of 0.39 $kgCO_2eq/kWh$. A cumulative of 8 hours of computation was performed on hardware of type Nvidia AGX Xavier Embedded Supercomputer (TDP of 30W), to simulate a working day at the technology firm. I8I seeks to become a Net-Zero, or Carbon-negative company by 2030.

Total emissions are estimated to be 0.09 $kgCO_2eq$ of which 0 percent was directly offset. This does not take into consideration the additional Colorado energy-savings, with 30 percent of the grid energy coming from renewable energy. Nor does this assessment account for I8I's, off-grid version of its Artificial Intelligence screening device, utilizing laptop batteries, which may contribute to additional energy savings.

Estimations were conducted using the https://mlco2.github.io/impactcompute Machine Learning Impact calculator presented in [**?**].

@articlelacoste2019quantifying, title=Quantifying the Carbon Emissions of Machine Learning, author=Lacoste, Alexandre and Luccioni, Alexandra and Schmidt, Victor and Dandres, Thomas, journal=arXiv preprint arXiv:1910.09700, year=2019