AI Pollution

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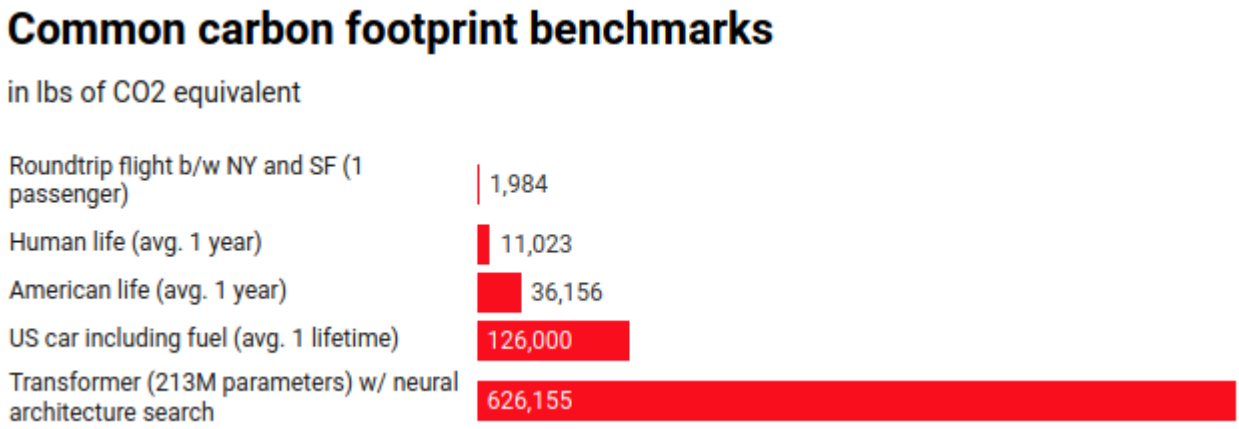
Recently the domain of artificial intelligence has experienced a boost in interest with the increasing abundance of computing power that enabled the training of very large artificial neural networks. This led to massive improvements in many domains, from the famous Alpha Go to automated language translation, speech recognition and autonomous driving, to name just a few. However, these models have a very large number of parameters and require extensive (and expensive) compute power to train, and with this comes a hidden cost: carbon emissions.

In a paper by Strubell et al., 2019 these costs are approximated for several state of the art models in NLP and can be much higher as the entire carbon emissions of a car over it's entire lifetime when techniques like network architecture search are used.



References:

1. https://arxiv.org/abs/1906.02243
2. https://www.technologyreview.com/2019/06/06/239031/training-a-single-ai-model-can-emit-as-much-carbon-as-five-cars-in-their-lifetimes/