**ABSTRACT**

I present a comparison of computational efficiency between training an agent for playing Pong in the Atari Environment in a sequential manner and in a parallelized manner. The agent is trained using a Deep Reinforcement Learning algorithm called Advantage Actor Critic (A2C). The parallel version of the algorithm is analyzed using multiple CPU cores on a single system instead of special hardware like Graphical Processing Units (GPU) or Tensor Processing Units (TPU).

**KEYWORDS**

**INTRODUCTION**

Reinforcement Learning algorithms are a class of algorithms that have proven to be quite promising in the field of decision making. That makes games a suitable area for their application. Combine them with Deep Learning which is known to produce rich representations of input data (visual data in this case) and we get the ability to play games at a human or even better-than-human level (1,2).The game chosen here is Pong which is an atari game and is provided as an environment in OpenAI (3).

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