WELL ISN'T THIS *NEAT*

A quick breakdown of the NEAT algorithm

By Jordan Torres

WHAT DOES *NEAT* MEAN?

NEAT or (**NeuroEvolution of Augmenting Topologies**) is an algorithm developed by Ken Stanley that applies genetic algorithms to machine learning.

Simple right? Well if that doesn't make sense i'll try to break it down.
In short:

- NEAT is an algorithm which takes a batch of AIs (genomes) attempting to accomplish a given task.
- NEAT will generate a population of genomes (neural networks)
- These genomes get evaluated based the fitness score of each genome.
- It then breeds and mutates the best genomes over the course of generations

This is very useful for AI and reinforcement learning! With the use of NEAT we can train models fast and then watch them grow based off the highest fitness score.

If you are wondering how this is different from deep learning modeling there is one major difference. Compared to traditional modeling where we are changing the layers, weights, and biases; NEAT is evolving itself to change the entire model and thus the neural network.

WANT TO LEARN MORE *NEAT* THINGS?

ARTIFI
INTELI
(AI)

If you are looking for more information about NEAT and how it can be used please use the links below!

NEAT Github
NEAT Website

Thanks for reading!