

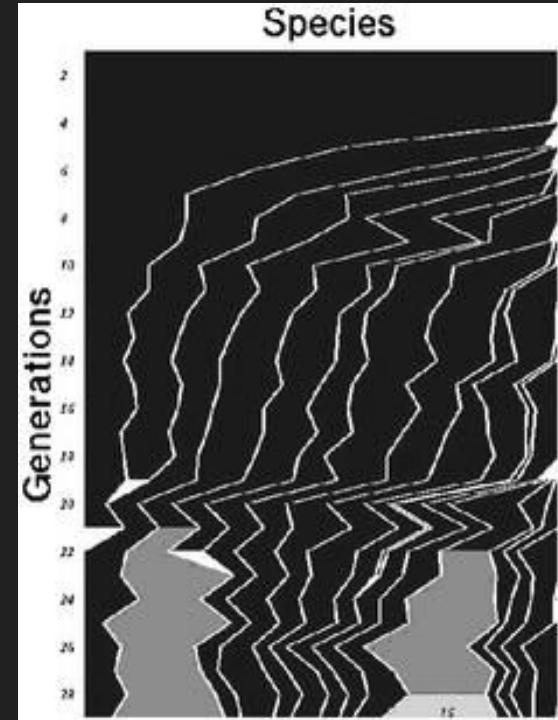
Understanding NEAT

A Brief Introduction into the NEAT algorithm

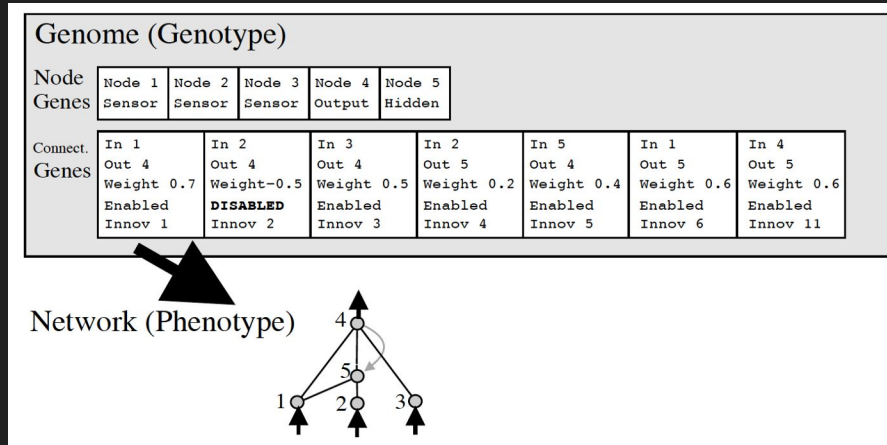
What is NEAT?

Neuro-Evolution of Augmenting Topologies

NEAT is a method for evolving artificial neural networks with a genetic algorithm. NEAT implements the idea that it is most effective to start evolution with small, simple networks and allow them to become increasingly complex over generations.



NEAT's algorithm



The NEAT algorithm has two lists of genes, a series of nodes and a series of connections. Input and output nodes are not evolved in the node gene list. Hidden nodes can be added or removed. As for connection nodes, they specify where a connection comes into and out of, the weight of such connection, whether or not the connection is enabled, and an innovation number.