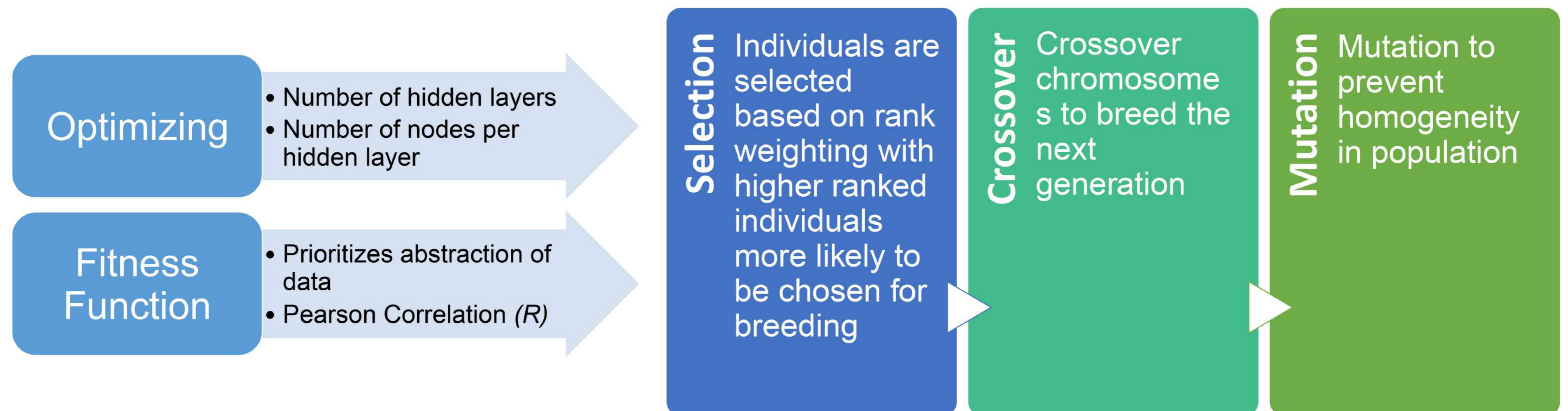


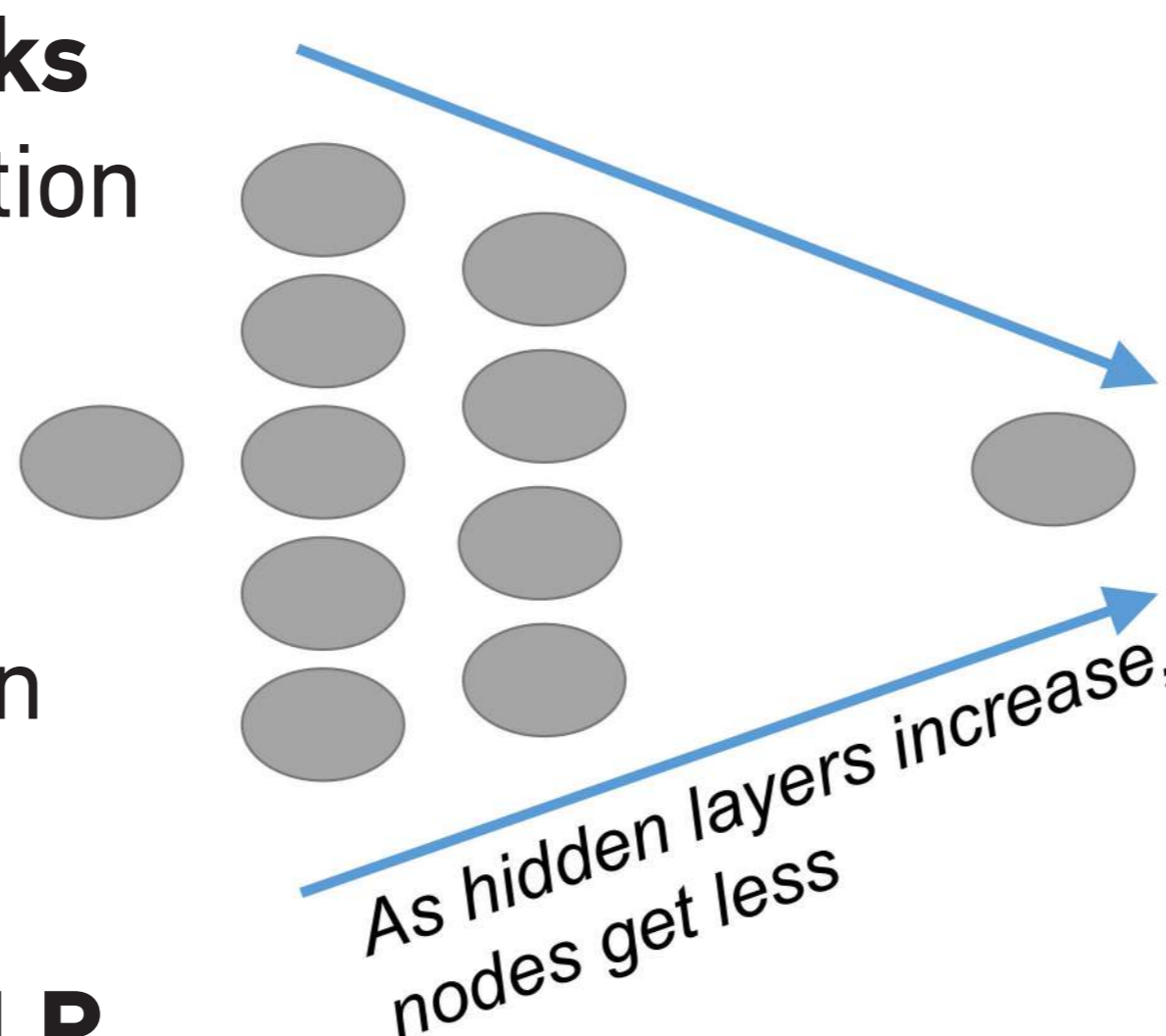
Technical Trading Using a Self-Evolving Multi-Layer Perceptron Network

Building a Deep Neural Network Adapted to the Dataset Using Genetic Algorithm



Abstraction in neural networks

To emulate knowledge abstraction in cognitive science, the neural networks that the GA finds are forced to conform to such structures for better abstraction of data



Result:

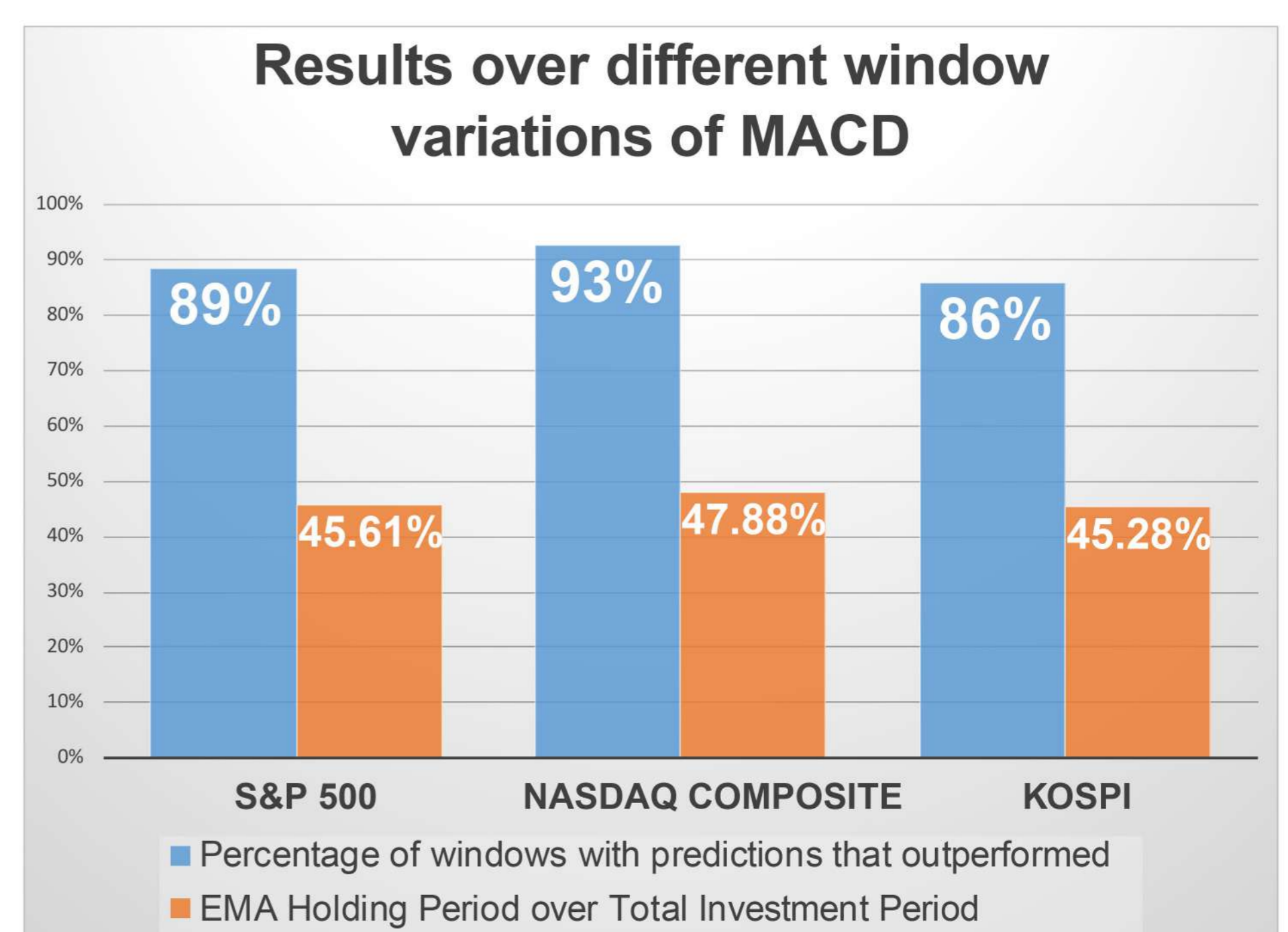
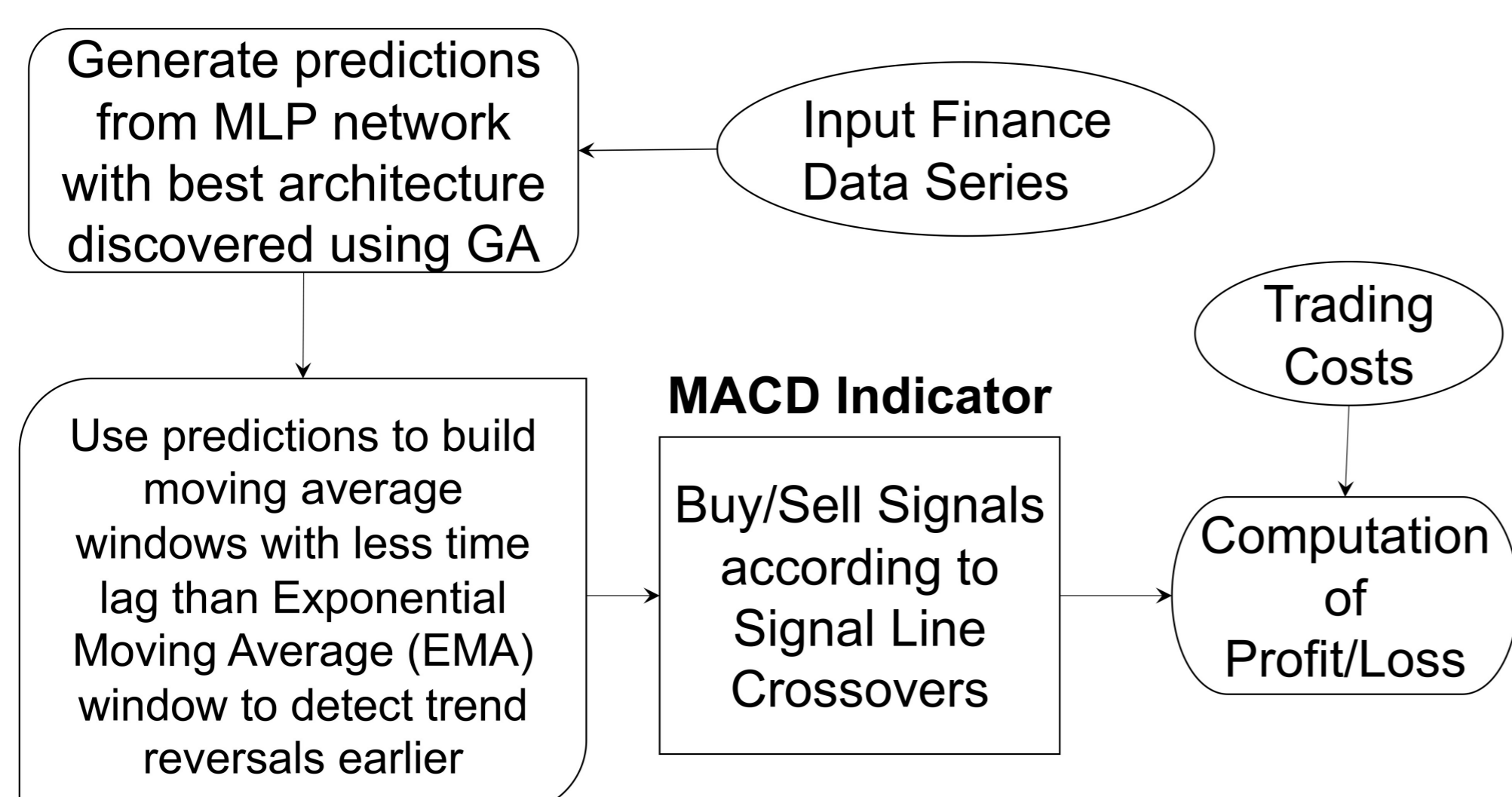
A multi-layer perceptron network that adapts its architecture to the dataset. It is the most compact in terms of width and is the least dense in terms of links while being capable of knowledge abstraction.

Pruning of fully connected MLP

To achieve conciseness and a minimum density network, pruning is employed to remove redundant weights without affecting the accuracy

Technical Trading System

Moving Average Convergence Divergence (MACD)



The graph on the right shows the moving average with predictions earn a higher profit than the EMA majority of the time