Abstract

Connectionism is a movement in cognitive science which hopes to explain human intellectual abilities using neural networks (also known as ‘neural nets’). Evolutionary Connectionist System is an adaptive, incremental learning and knowledge representation system that evolves its structure and functionality, where in the core of the system is a connectionist architecture.
that consists of neurons (information processing units) and connections between them. Neural networks are simplified models of the brain composed of large numbers of units (the analogs of neurons) together with weights that measure the strength of connections between the units. These weights model the effects of the synapses that link one neuron to another. Experiments on models of this kind have demonstrated an ability to understand information, adapt knowledge and evolve intelligence.

Fuzzy neural networks are connectionist architectures that are trained as neural networks, but their structure can be interpreted as a set of fuzzy rules. In contrast to them, neuro-fuzzy inference systems consist of a set of rules and an inference method that are embodied or combined with a connectionist structure for a better adaption.

This paper aims to explore the fuzzy neural approach and neurofuzzy inference system to amalgamate evolutionary connectionism and constitutes a challenge to classicism which has been a matter of hot debate in recent years.

Reference


Index Terms

Computer Science

Information
Technology

Key words

- Evolving systems
- Fuzzy Neural Networks (FNN)
- Neuro-Fuzzy system

Evolving Connectionism
Connectionist systems