Agent based Evolution Model in JAVA (ABEMJ)

Abstract

The human dominance on earth exhibits a general rule-‘with intelligence comes power’. As of now, human brain is the most complicated object in the entire known universe. Agent Based Evolution Model in JAVA (ABEMJ) is a simulation designed on Java platform that portrays the learning and evolution of artificially intelligent agents. It is a two dimensional environment where agents mimicking human behavior, born with some minimum amount of energy survive, search for food and upon attaining a certain level, produce offspring. The agents showcase intelligence by using their memory for storing their experiences and learnings from their past mistakes. Their will to survive makes them protective about their food and they compete with each other using energy to win their only source of energy i.e. food. This paper describes a platform for the evolution of autonomous square shaped agents thus, providing an efficient tool for the study of artificial evolution and coevolution.

References
1. Larry Yaeger, “Computational genetics, physiology, metabolism, neural systems, learning, vision, and behavior or polyworld: life in a new context

Index Terms

Computer Science  Software Engineering
Keywords

Agent Based Evolution Model in Java (ABEMJ), ALife, agents, evolution, genetic algorithm, artificial intelligence, positive food, negative food.