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Applying natural evolution for solving computational problems - Lecture 1

Tuesday 7 March 2017 09:00 (1 hour)

Darwin's natural evolution theory has inspired computer scientists for solving computational problems. In a similar way to how humans and animals have evolved along millions of years, computational problems can be solved by evolving a population of solutions through generations until a good solution is found.

In the first lecture, the fundaments of evolutionary computing (EC) will be described, covering the different phases that the evolutionary process implies. ECJ, a framework for researching in such field, will be also explained.

In the second lecture, genetic programming (GP) will be covered. GP is a sub-field of EC where solutions are actual computational programs represented by trees. Bloat control and distributed evaluation will be introduced.

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