

Evolvable Media Repositories: An Evolutionary System to Retrieve and Ever-Renovate Related Media Web Content

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Abstract

The paper tackles the question of evolvable media repositories, i.e., local pools of media files that are retrieved over the Internet and that are ever-renovated with new, related files in an evolutionary fashion. The herein proposed method encodes genotypic space by virtue of simple undirected graphs of natural language tokens that represent web queries without employing fitness functions or other evaluation/selection schemata. Once a first population is seeded, a series of modular crawlers query the particular World Wide Web repositories of interest for both media content and assorted meta-data. Then, a series of attached intelligent comprehenders analyse the retrieved content in order to eventually generate new genetic representations, and the cycle is repeated. Such a method is generic, scalable and modular, and can be made fit the purposes of a wide array of applications in all sorts of disparate contextual and functional scenarios. The paper features a formal description of the method, gives implementation guidelines, and presents example usages.

Keywords

Genetic algorithms Database management Multimedia information systems Natural language processing

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