Special Issue

Evolving Machine Learning and Deep Learning Models for Computer Vision (ECV)

Message from the Guest Editors

Evolutionary algorithms have demonstrated superior global search capabilities and have been applied to diverse real-life single-, multi-, and many-objective optimisation problems. Deep learning models have demonstrated great success in dealing with complex computer vision tasks. Examples include the use of deep convolutional neural networks combined with recurrent models for image caption generation and visual question generation. Deep learning combined with transfer learning has also been employed to deal with various computer vision tasks. Nevertheless, the design of new and effective deep learning models and identification of the optimal hyper-parameters of the resulting models require profound domain knowledge, which may not always be available to researchers. In this regard, the superior search capabilities of evolutionary algorithms can be exploited to tackle such optimisation problems. This Special Issue aims to stimulate research pertaining to not only feature selection, optimal topology, and hyper-parameter identification for clustering and classification systems but also evolving deep learning architecture generation through evolutionary algorithm and related paradigms.

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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