



IWANN 2025. Abstracts

[0094] *Tackling Missing Data Head-On: Strategies to Mitigate Survival and Confirmation Bias*

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Most Artificial Intelligence models require the information in the records to be used to be fully informed. These models require a policy for handling missing information. However, traditional policies have tried to fill in the missing information with known information. This approach is correct when the missing information is random and wrong when it is not. In this article we start with a review of the main policies employed, and analyse the consequences of elimination or imputation policies and argue that these policies are sometimes unwise.

[0116] *An Emotional Classifier for Machine's Artificial Visual Aesthetic Appraisal*

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Recent emergence of artificial creativity, consequent from latest advancements of AI, questions traditional standpoints relating "creativity" commonly considered as the exclusive expression of humans' intellect. However, from our point of view, artificial creativity cannot be addressed without considering the philosophical deliberations relating human's intellect and his self-sufficiency in aesthetic perception of the surrounding. In this paper we present an Emotional Unsupervised Classifier achieving the aesthetic artificial visual appreciation of visual information. The unsupervised nature of our classifier makes the issued decision mechanism an emerging process by opposition with imitative nature of supervised classifiers. It is important for blending in aesthetic experience based appraisal. Operating as a self-organizing map issued from a hybrid dual process, its topological bearing follows an emotions model issued from behavioral psychology. This latest character makes as well its operational mechanism as the issued results explainable. Experimental results validating the investigated EUC are reported and discussed.

[0195] *Hardware and Software influence on EAs power consumption*

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Artificial Intelligence (AI) is the fastest-growing area in recent years to support decision-making but it may also involve environmental impacts and energy implications. Researchers emphasize the importance of considering energy consumption to ensure sustainable AI solutions. This paper examines how evolutionary algorithms (EA), specifically genetic algorithms (GA), affect energy consumption when applied to optimization problems. It compares GA analyzing the impact of parameters across several GPU and CPU architectures. Results showed that using a GPU for parallel processing with different values of population size does not always mean that we will have great energy savings. However, if we look at the instantaneous consumption, small differences can be seen for large population sizes. Interestingly, smaller populations sometimes require higher energy consumption. Regarding programming languages, the