

Exploring the application of genetic algorithms and artificial neural networks within companies in Western Serbia, Milovan Milivojevic, PhD, Academy of Applied Science of Western Serbia, Serbia

ABSTRACT: In the era of machine learning and data science, genetic algorithms and artificial neural networks have become a widely used approach in solving optimization and prediction challenges encountered by companies in the present business landscape. This study provides an examination of the current state of affairs and sheds light on the potential for implementing these methods in the manufacturing and public utility systems of Western Serbia. The research was carried out in selected companies with a diverse range of activities, encompassing industries such as metal, plastic, cement, furniture, paint, electricity, and drinking water production. The findings from this paper suggest that there is a substantial opportunity for the implementation of the aforementioned methods and the need for a swift shift in the existing production paradigm towards the adoption of Manufacturing Execution Systems and Industry 4.0 practices in production processes.