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Short Summary of IPM-Model: AI and metaheuristic-enabled face recognition using image partial matching for multimedia forensics investigation with genetic algorithm.

I wonder how image processing with technology can share data and information because there has never been a time in the history of technology when such things could operate the way they do now. In this study, I discovered the design and application of cutting-edge, machine learning-based algorithms that produce better results when we use artificial neural networks to recognize human faces. This kind of development is crucial to the process of partial image matching and multimedia forensics investigation. This study article suggested a PCA and GA model as a solution. With the aid of linear transformation, we were able to produce the outcome based on dimension reduction as per PCA, however GA is the most potent computational model that converts biological structure to string structure quickly. Additionally, The Georgia Institute of Technology conducted an experimental study, the results of which demonstrate the robustness of this modality in the performance of forensics investigation. The study used a database of face image recognition for multimedia forensics investigation, retrieving personal information and identification with an accuracy rate of 93.7%. There are still some difficulties, nevertheless, such as the inherent ambiguity brought on by the presence of a cosmetic product's additional layer on a picture, which makes it difficult to detect and recognize an image.

The development of facial recognition technology is used extensively, especially in forensics investigations. It takes on a very powerful role all the time and, to a certain extent, identifies the human face, focusing on the eyes, the width of the nose, the form of the lips, ears, and jaw. Provides accurate facial image design discovery, ID, recognition, and advancement with information provenance, unchanging nature, detectability, simplicity, and affirmation for carrying out various tasks and maintaining trust inside the computerized investigation process while catching, gathering, totaling, dissecting, safeguarding, and deciphering the image-based advanced proof (chain of care). Additionally, it ensures the protection of image-related data throughout the whole inquiry, up until the point at which it may be admitted into evidence in court an additional option.