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Patent Search

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Abstract:

[033] This invention presents an advanced image and video compression system that combines hybrid neural networks (Variational Autoencoders, Generative Adversarial Networks, and Transformers) with quantum computing and edge computing for enhanced efficiency and scalability. The system compresses data by encoding it into space, reconstructing high-quality images, and capturing dependencies across video frames. Quantum processors handle intensive computations, while edge computing facilitates real-time compression closer to data sources. Auxiliary data and meta-learning optimize compression for varying content, and a reinforcement learning agent adapts data flow in fluctuating network conditions. This system is suited for applications requiring high-quality, low-latency compression, such as streaming, telemedicine, AR/VR. Accompanied Drawing [FIG. 1]

Complete Specification

Description:[018] While the present invention is described herein by way of example using embodiments and illustrative drawings, those skilled in the art will recognize that the invention is not limited to the embodiments of drawing or drawings described and are not intended to represent the scale of the various components. Further, some components that may form a part of the invention may not be illustrated in certain figures, for ease of illustration, and such omissions do not limit the invention outlined in any way. It should be understood that the drawings and detailed description thereto are not intended to limit the invention to the particular form disclosed; on the contrary, the invention is to cover all modifications, equivalents, and alternatives falling within the scope of the present invention as defined by the appended claims. As used throughout this description, the word "may" is used in a permissive sense (i.e. meaning having the potential to), rather than the mandatory sense (i.e. meaning must). Further, the words "a" or "an" mean "at least one" and the word "plurality" means "one or more" unless otherwise mentioned. Furthermore, the terminology and phraseology used herein is solely used for descriptive purposes and should not be construed as limiting in scope. Language such as "including," "comprising," "having," "containing," or "involving," and variations thereof, is intended to be broad and encompass the subject matter listed thereafter, equivalents, additional subject matter not recited, and is not intended to exclude other additives, components, integers or steps. Likewise, the term "comprising" is considered synonymous with the terms "including" or "containing" for applicable legal purposes. Any discussion of documents, acts, materials, devices, articles and the like is in the specification solely for the purpose of providing a context for the present invention. It is not suggested or represented that any or all of these matters form part of the prior art base or are common general knowledge in the field relevant to the present invention.

[019] In this disclosure, whenever a composition or an element or a group of elements is preceded with the transitional phrase "comprising", it is understood that we contemplate the same composition, element or group of elements with transitional phrases "consisting of", "consisting", "selected from the group of consisting of",

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