Generative Memory with Selective Reconstruction

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Abstract— **We propose a selective reconstruction framework for generative memory that learns to partially recall major features of the memory, inspired by the neural computation of humans. Our framework mimics the memorizing procedure of humans how they encode, retain, selectively retrieves, and decode information that is considered important among the tremendous amount of incoming information. Our generative memory model remembers the memories in a distributed manner using conditional cues. It varies the intensity of memorization of the data depending on the task it tries to solve by concentrating on the reconstruction of the important aspect of the data for solving the task. The model excludes recalling the minor details which may not be needed for solving the task. To evaluate our generative memory model, we experiment on visual and textual question answering datasets. We demonstrate the trade-off between with and without selective reconstruction of the generative memory**