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(54) **Title:** GENERATING NEURAL NETWORK OUTPUTS BY CROSS ATTENTION OF QUERY EMBEDDINGS OVER A SET OF LATENT EMBEDDINGS

NEURAL NETWORK SYSTEM 100

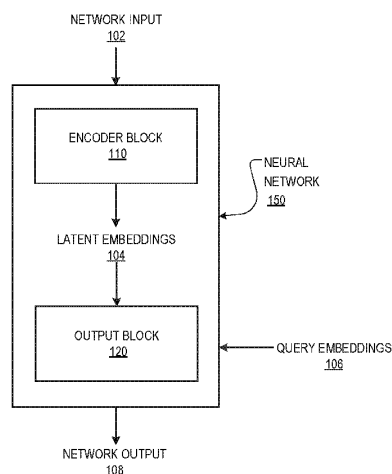


FIG. 1

(57) **Abstract:** Methods, systems, and apparatus, including computer programs encoded on a computer storage medium, for generating a network output using a neural network. In one aspect, a method comprises: obtaining: (i) a network input to a neural network, and (ii) a set of query embeddings; processing the network input using the neural network to generate a network output that comprises a respective dimension corresponding to each query embedding in the set of query embeddings, comprising: processing the network input using an encoder block of the neural network to generate a representation of the network input as a set of latent embeddings; and processing: (i) the set of latent embeddings, and (ii) the set of query embeddings, using a cross-attention block that generates each dimension of the network output by cross-attention of a corresponding query embedding over the set of latent embeddings.

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