Recurrent Neural Network (projections go forward and backward)

* Hopfield Neural network is a famous recurrent neural network
* Edges between nodes area both forward edges and backward edge

Activity from one level can feed back to an earlier layer

*Autoencoder*

Dimensionality reduction – how can we represent high-dimensional patterns in lower dimensions

If there is only a plane’s worth of information in 3d pattern, then by projecting to 2d layer and then having training output to 3d layer, these dimension pop out

Error = Sum Squares Error = Take difference of each teaching value and output value and square it

* This is Summed over entire patterns
* Learning as optimization