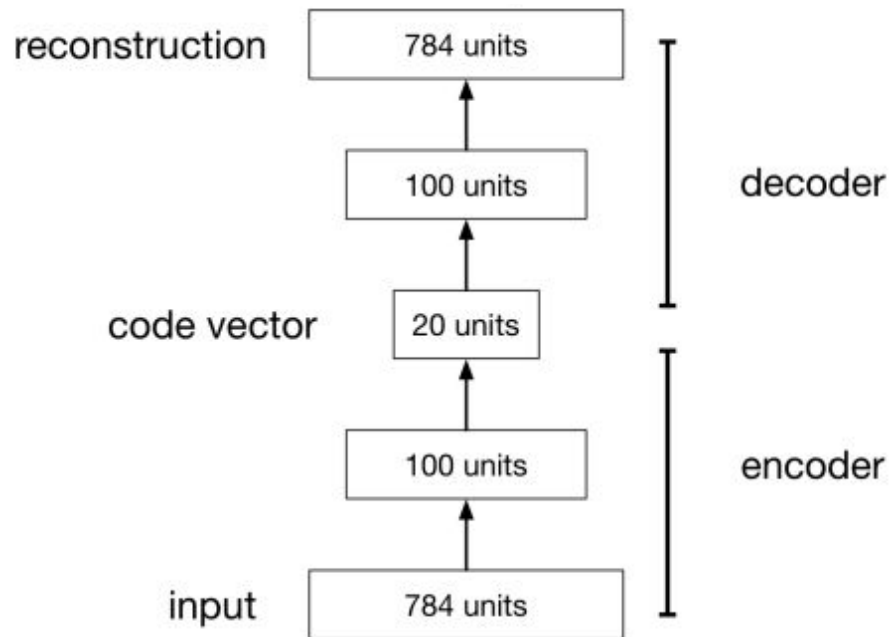


Machine Learning

Lecture 5

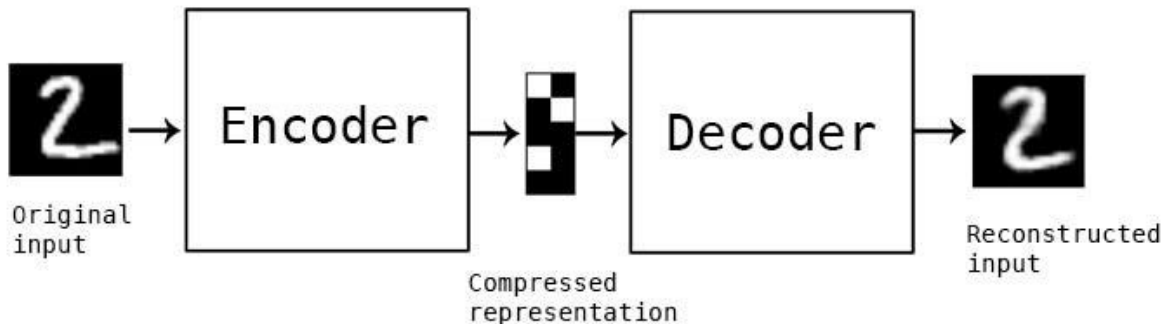
Autoencoders

- An **autoencoder** is a feed-forward neural net whose job it is to take an input \mathbf{x} and predict \mathbf{x} .
- To make this non-trivial, we need to add a bottleneck layer whose dimension is much smaller than the input.



Why Autoencoders ?

- Map high-dimensional data to n dimensions for visualization.
- Data Compression (i.e. reducing the file size).
- Learn abstract features in an unsupervised way so you can apply them to a supervised task



Deep Autoencoders

