



Autoencoder the Squirrel

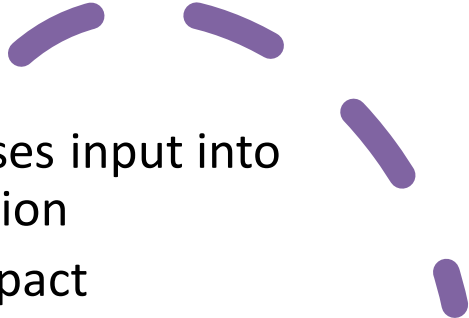


What is an Autoencoder?

- An autoencoder is a type of neural network used to compress and reconstruct data.
- Like a squirrel:
 - Gathers nuts (input data)
 - Hides them efficiently (encoding)
 - Retrieves them when needed (decoding)



How It Works

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- 1. Encoder: Compresses input into a smaller representation
 - 2. Latent Space: Compact 'memory' storage
 - 3. Decoder: Reconstructs original data from compressed form
 - Squirrel analogy:
 - Backpack = Encoder
 - Hidden stash = Latent space
 - Rebuilding nut stash = Decoder

Applications of Autoencoders

- Image Compression

- Noise Reduction

- Anomaly Detection

- Pre-training for Deep Learning Models

