

Autoencoders - Testes e Aplicações

CPE 727 - Aprendizado de Profundo

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Table of Contents

1 Denoising Autoencoder

► Denoising Autoencoder

► Anexos

Dataset

1 Denoising Autoencoder

MNIST Dataset



Noisy MNIST Dataset

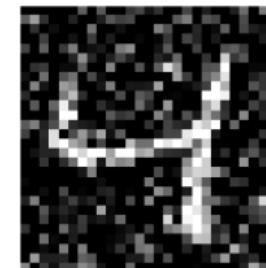
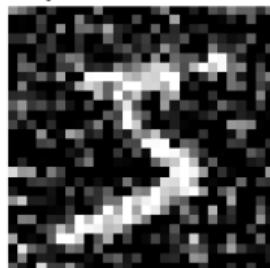


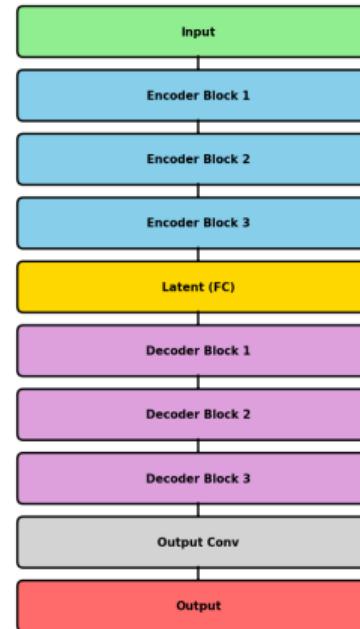
Figura: Imagens do MNIST e Noisy MNIST. Ruído Gaussiano com 0.3 de desvio padrão.

Modelo

1 Denoising Autoencoder

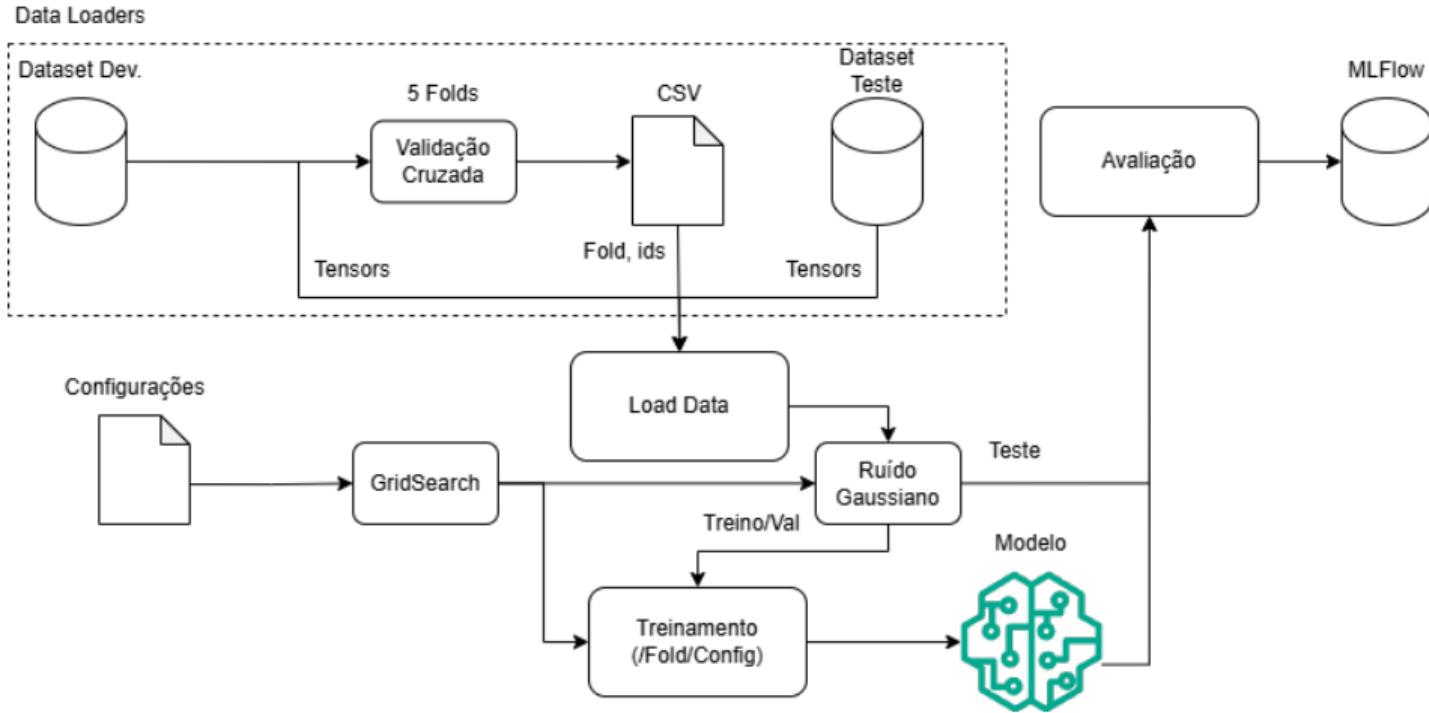
- Input: imagens 28x28x1 (Noisy MNIST)
- Encoder:
 - 3 Camadas Convolucionais (Kernel 3x3 e Stride 1)
 - BatchNorm
 - ReLU
 - MaxPooling(Kernel 2x2, Stride 2)
- Decoder:
 - 2 Camadas Convolucionais T. (Kernel 3x3 e Stride 2)
 - BatchNorm
 - ReLU
 - Camada Convolucional T. Final (Kernel 3x3, Stride 1)
 - Sigmoid

Denoising Autoencoder Architecture



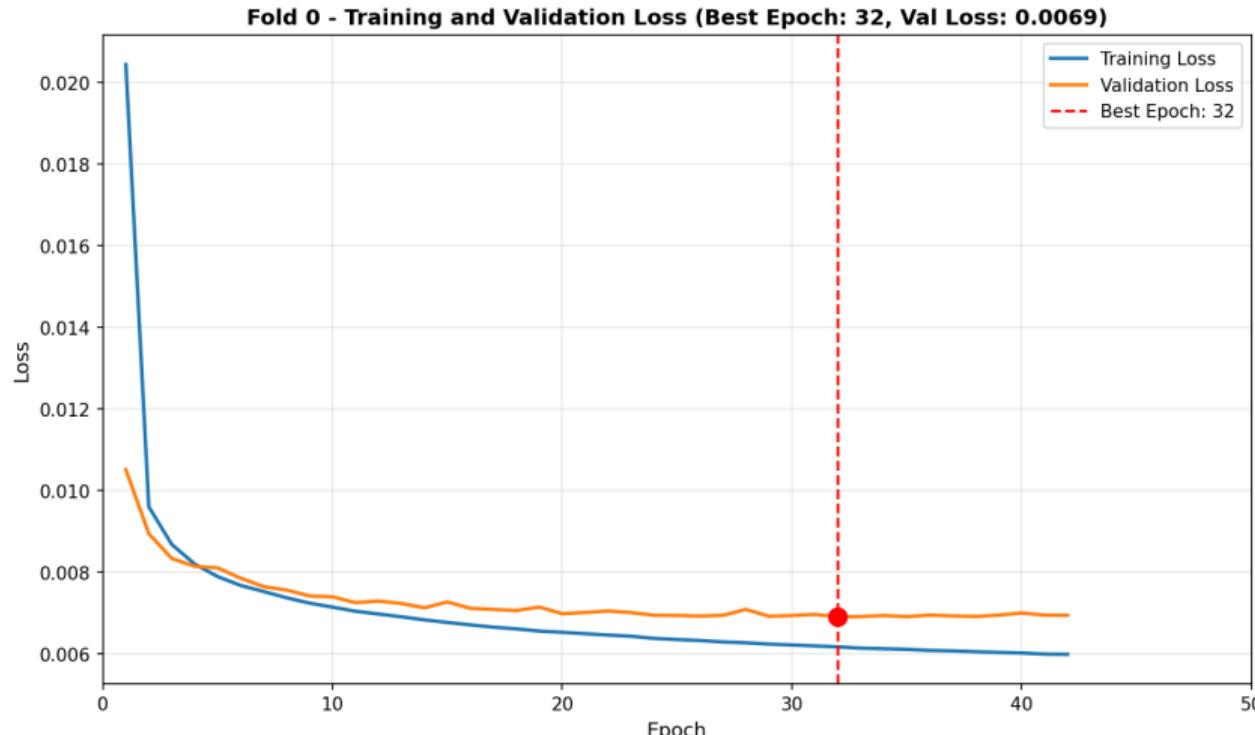
Metodologia

1 Denoising Autoencoder



Treinamento

1 Denoising Autoencoder



Resultado - Denoising

1 Denoising Autoencoder

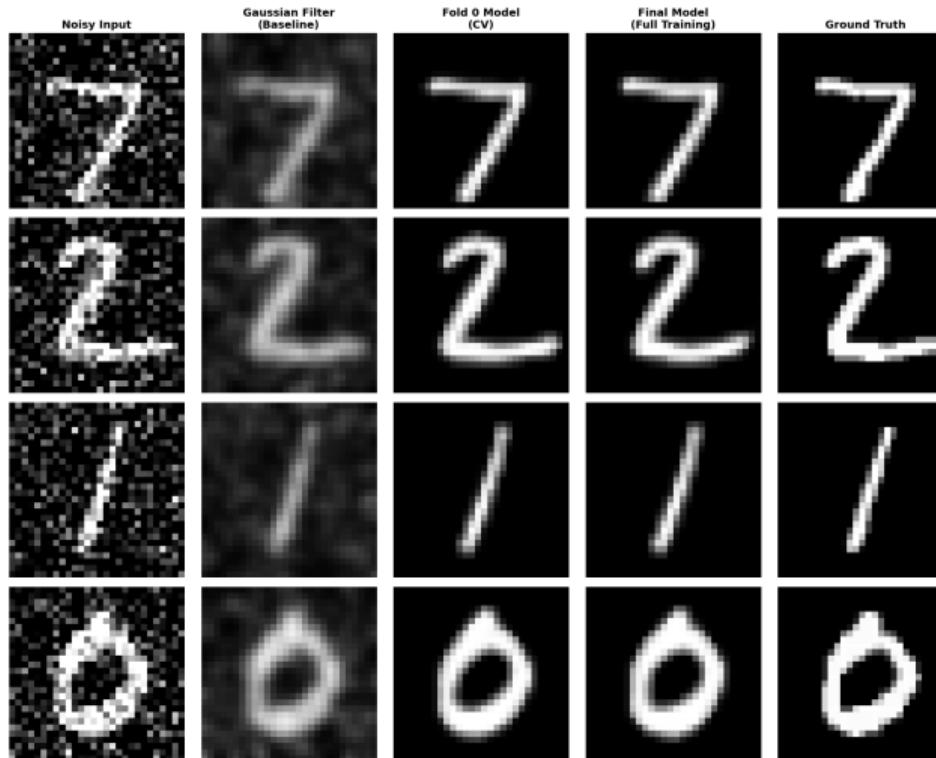


Table of Contents

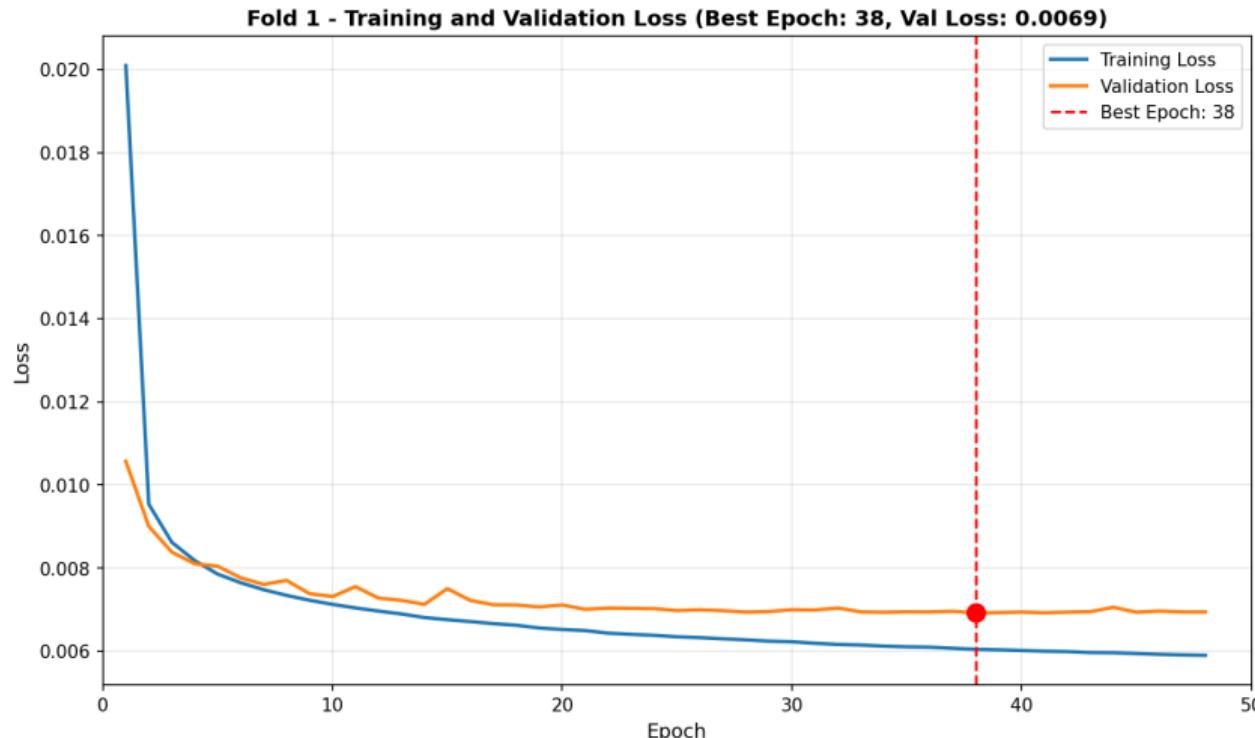
2 Anexos

► Denoising Autoencoder

► Anexos

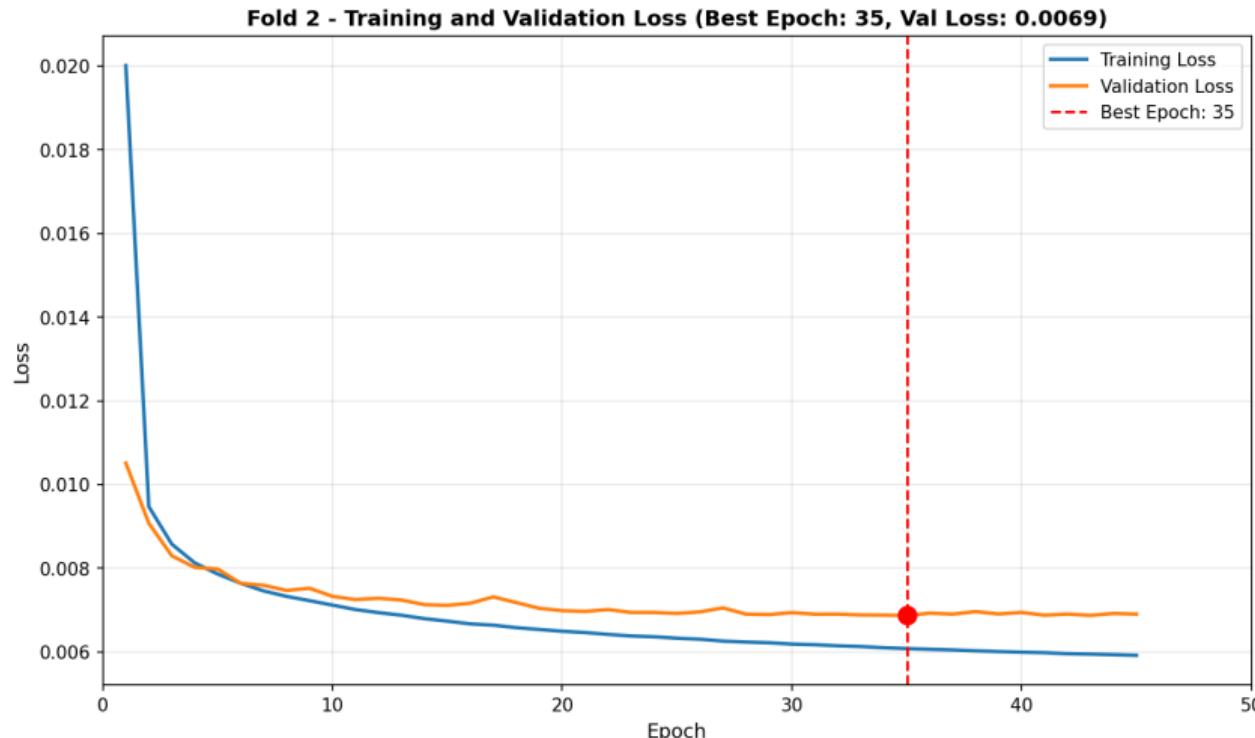
Treinamento

2 Anexos



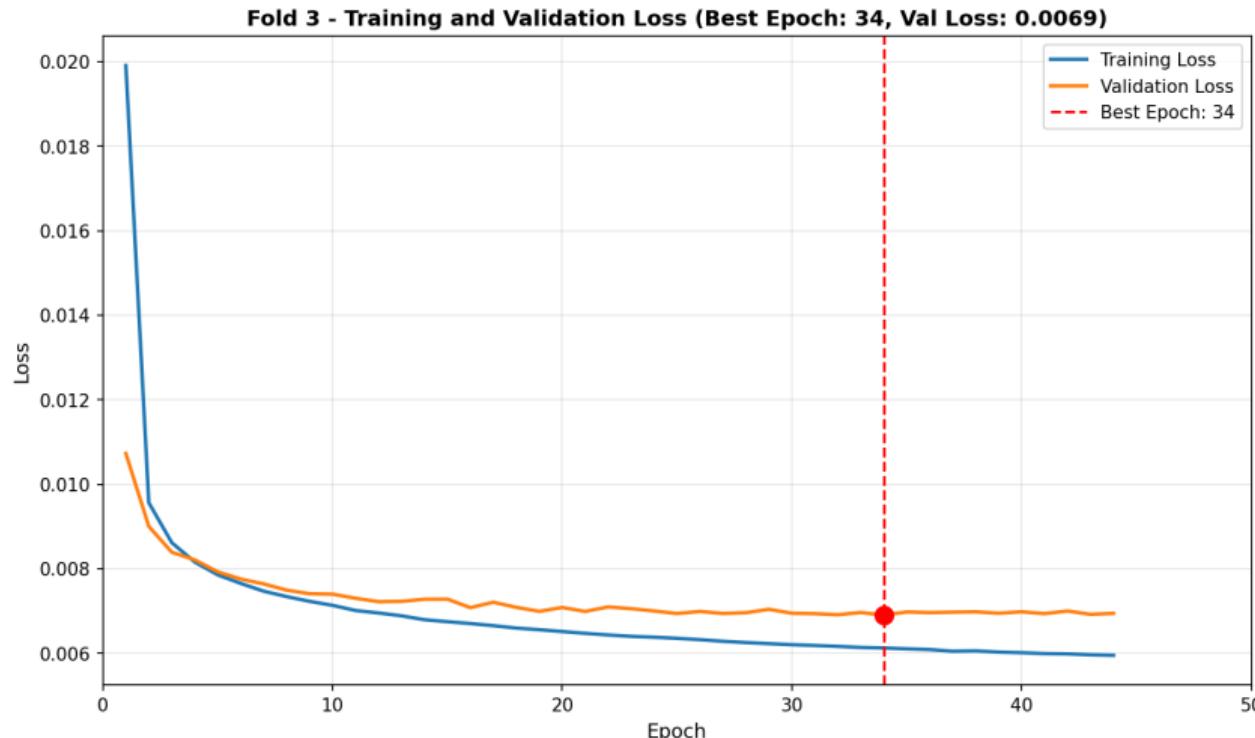
Treinamento

2 Anexos



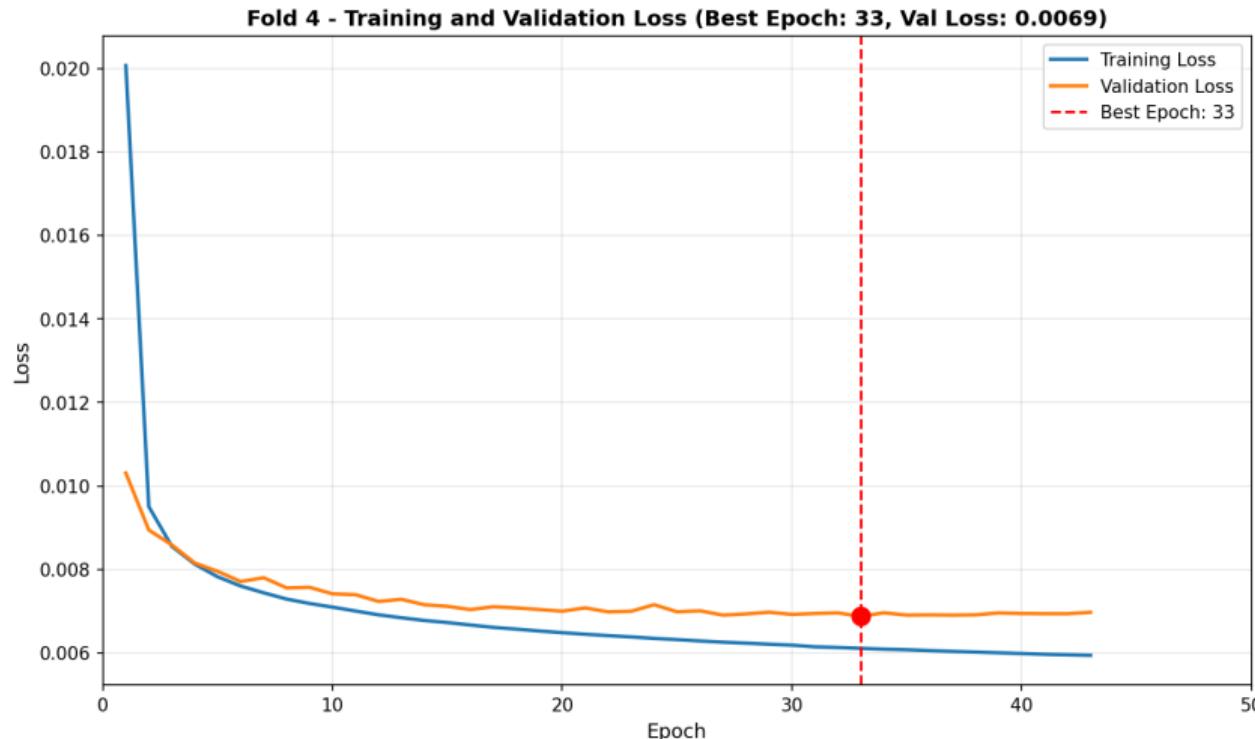
Treinamento

2 Anexos



Treinamento

2 Anexos



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*Obrigado pela Atenção!
Alguma Pergunta?*

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