



# SIA TP5

## Autoencoders

# Equipo

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# Ejercicio 1 A

Autoencoder

Reducción de dimensionalidad

Exploración del espacio latente

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# Capa latente 12

Capas: [35, 25, 12, 16, 12, 16, 12, 25, 35]

Final error:



# Capa latente 4

Capas: [35, 15, 20, 12, 8, 4, 8, 12, 20, 15, 35]

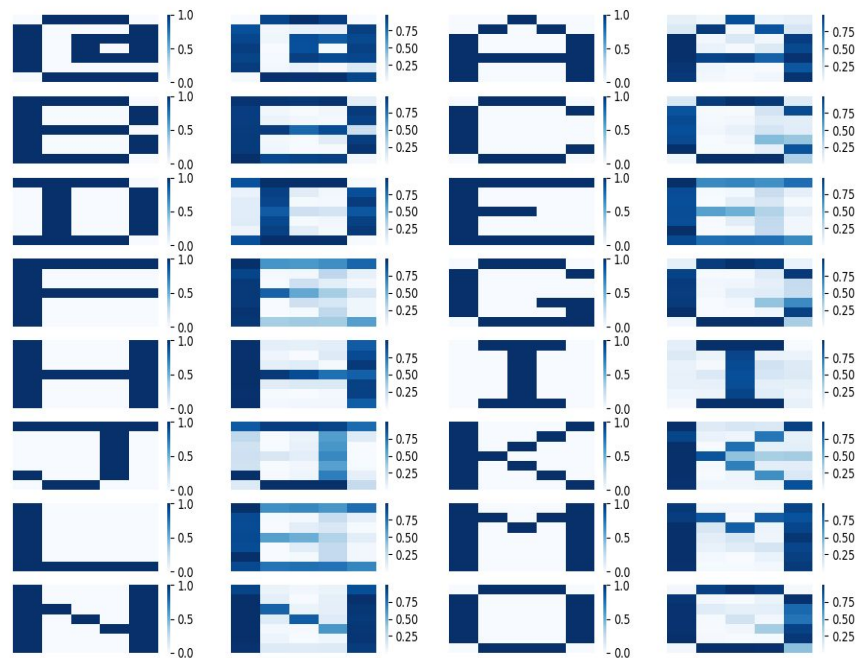
Final error:



# Capa latente 4

Capas: [35, 15, 20, 12, 8, 4, 8, 12, 20, 15, 35]

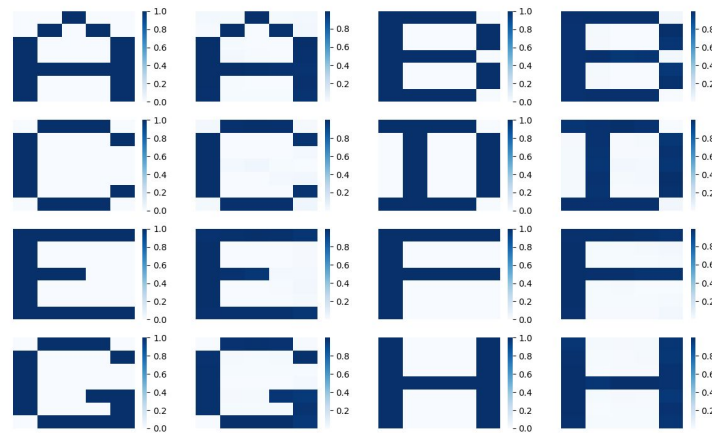
Final error: 15.2398



# Capa latente 4

Capas: [35, 15, 20, 12, 8, 4, 8, 12, 20, 15, 35]

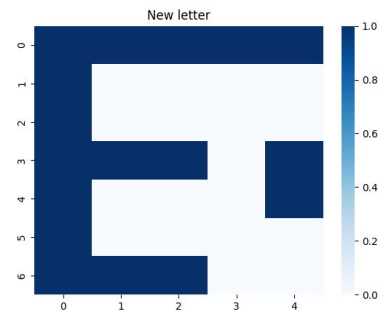
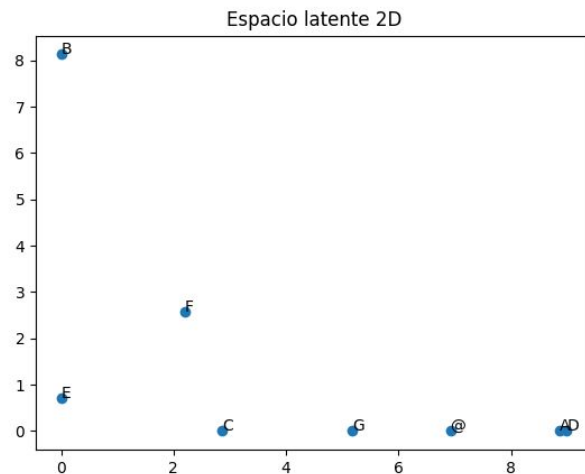
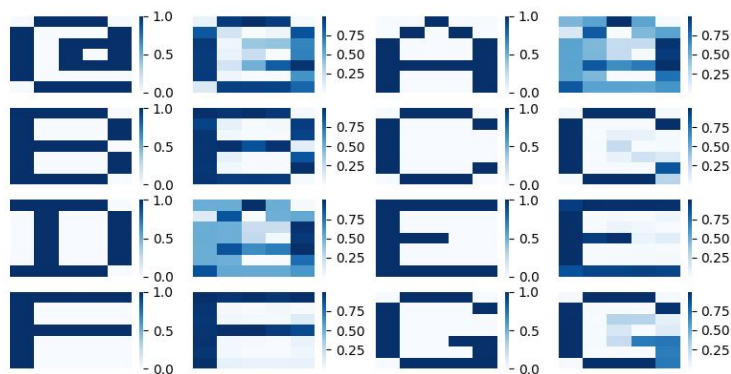
Final error: 0.0648



# Capa latente 2

Capas: [35, 15, 20, 12, 8, 2, 8, 12, 20, 15, 35]

Final error: 13.2486

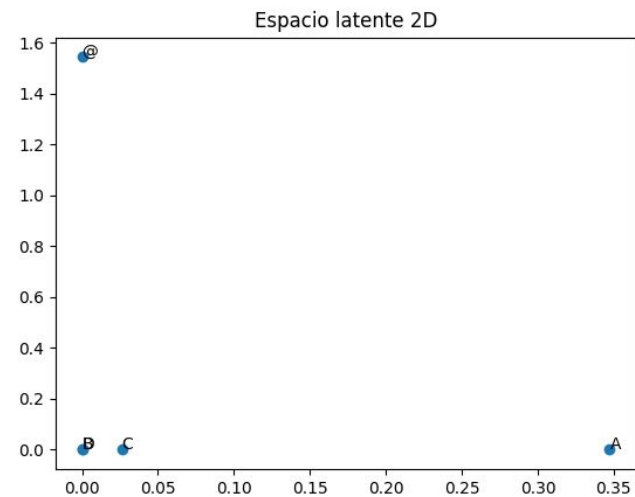
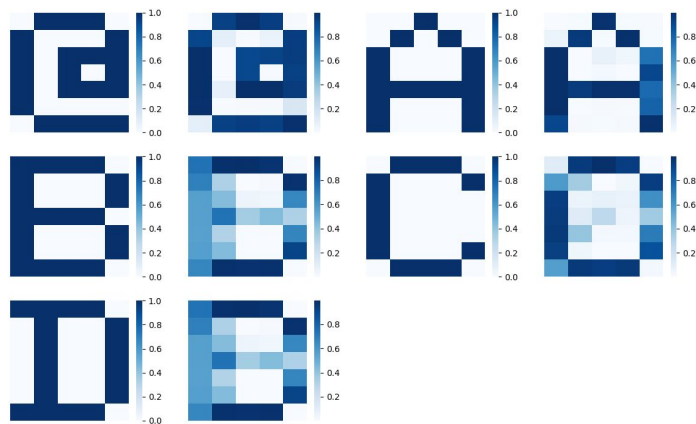




# Capa latente 2

Capas: [35, 15, 20, 12, 8, 2, 8, 12, 20, 15, 35]

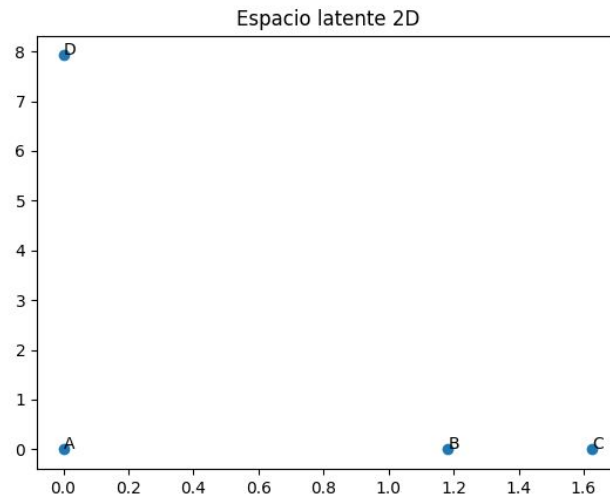
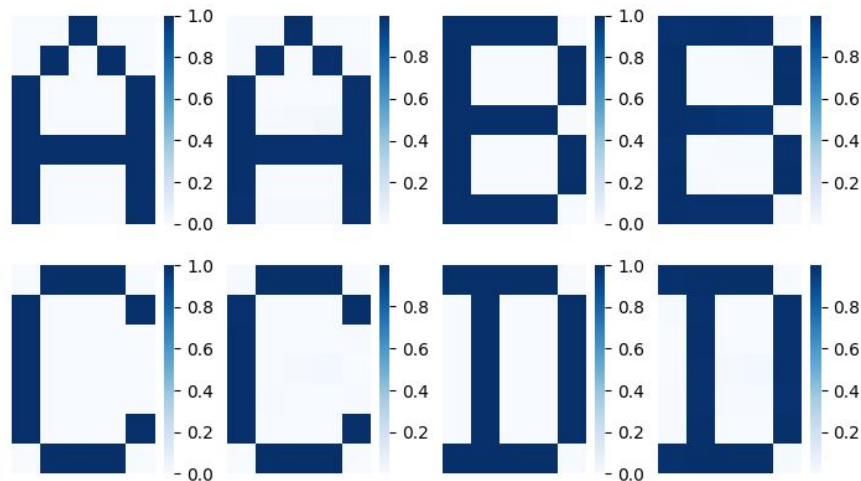
Final error: 9.6056



# Capa latente 2

Capas: [35, 15, 20, 12, 8, 2, 8, 12, 20, 15, 35]

Final error: 0.00553



# Ejercicio 1 B

Denoising Autoencoder

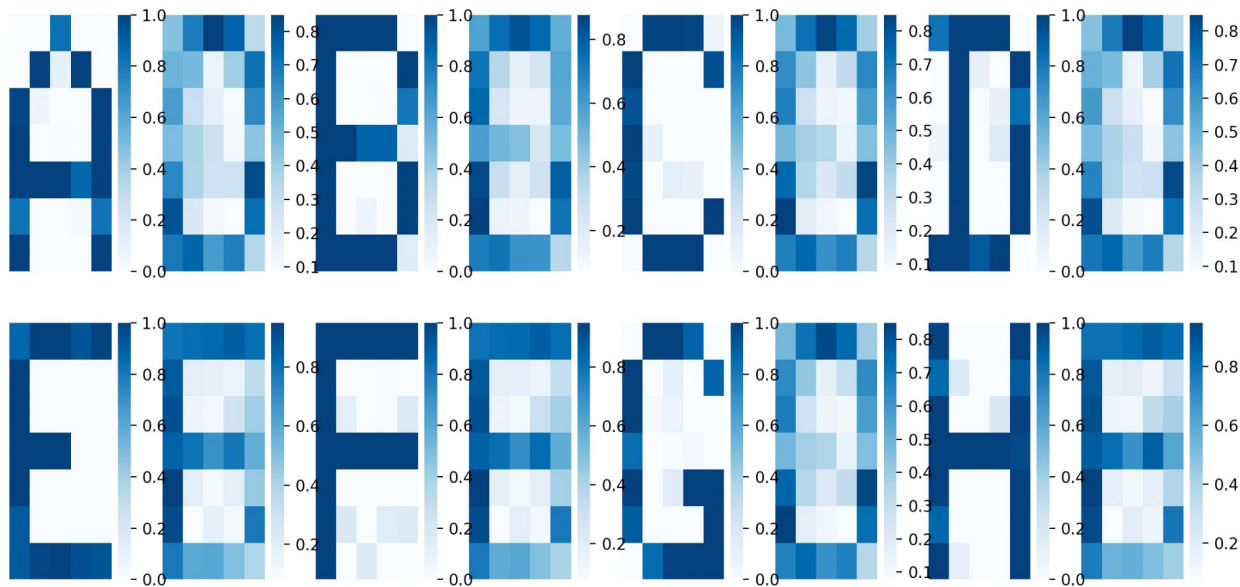
Que tanto ruido puede aprender

Mutación

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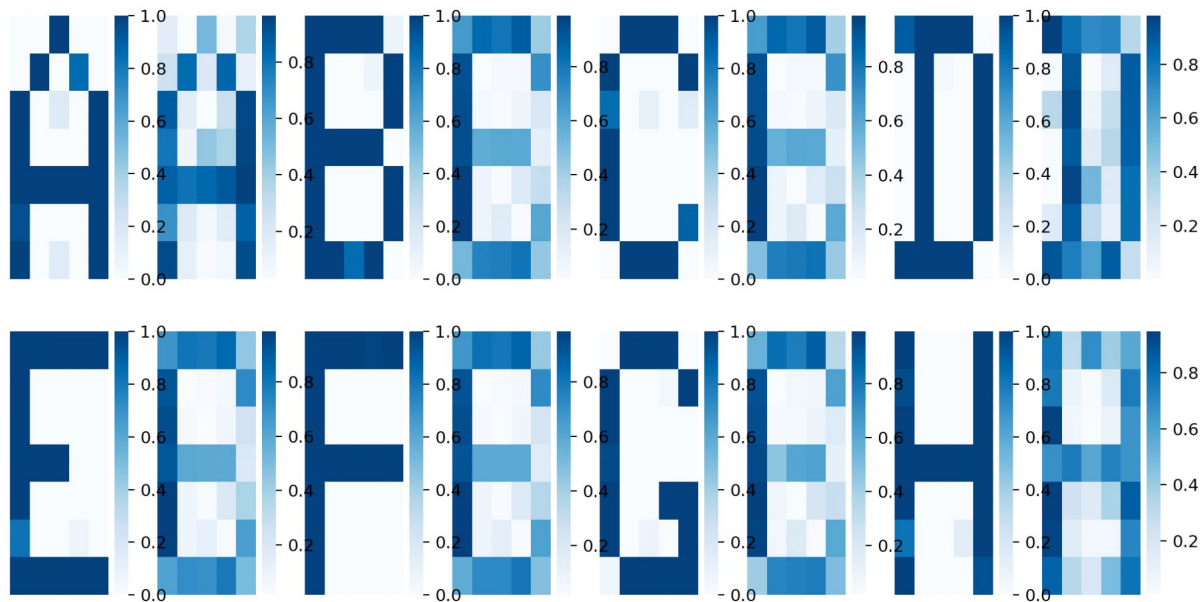
# Reducción de Ruido - Caso 1

- Arquitectura: 35, 25, 9, 12, 4, 12, 9, 25, 35
- Error: 19.3605



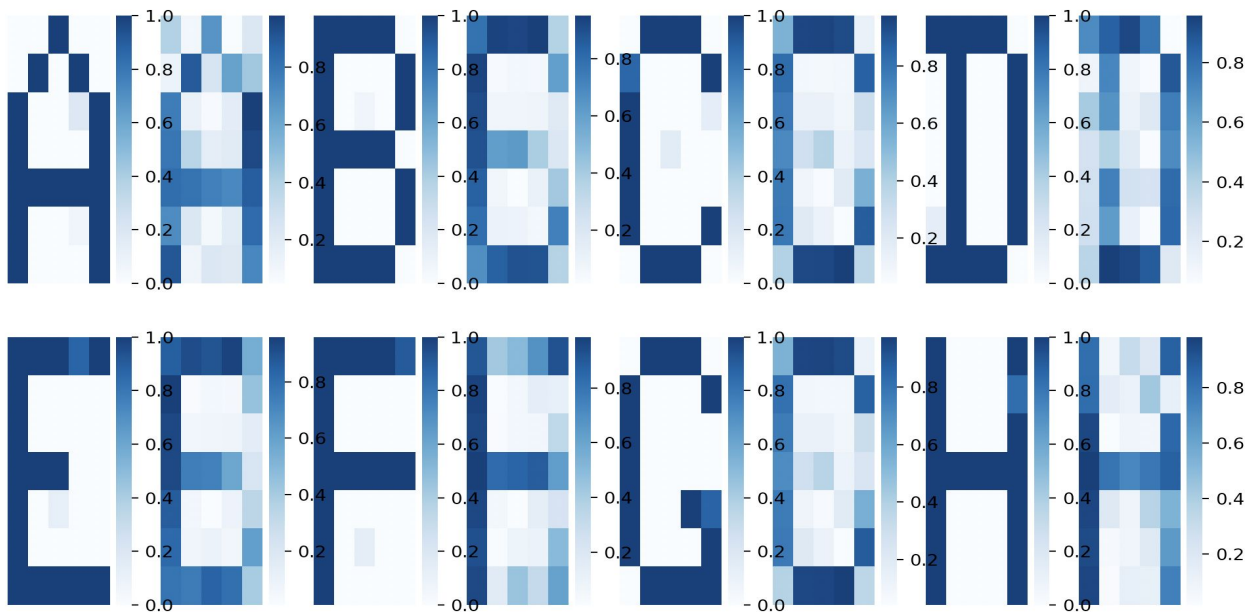
# Reducción de Ruido - Caso 1

- Arquitectura: 35, 25, 9, 12, 4, 12, 9, 25, 35
- Error: 11.2335



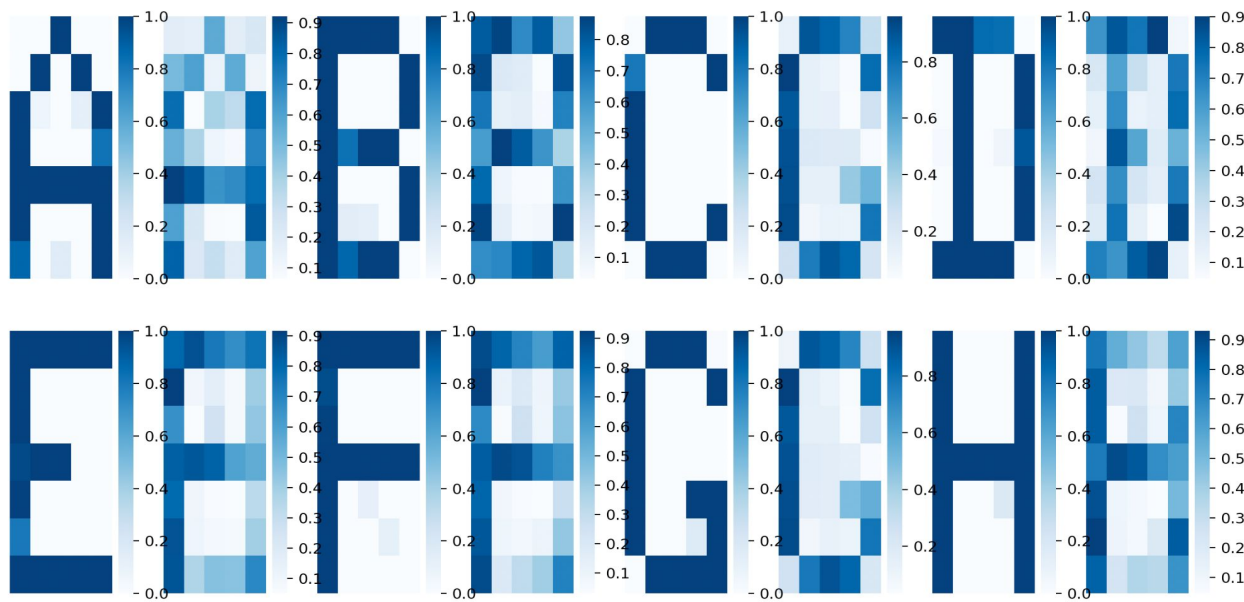
# Reducción de Ruido - Caso 1

- Arquitectura: 35, 25, 9, 12, 4, 12, 9, 25, 35
- Error: 8.6401



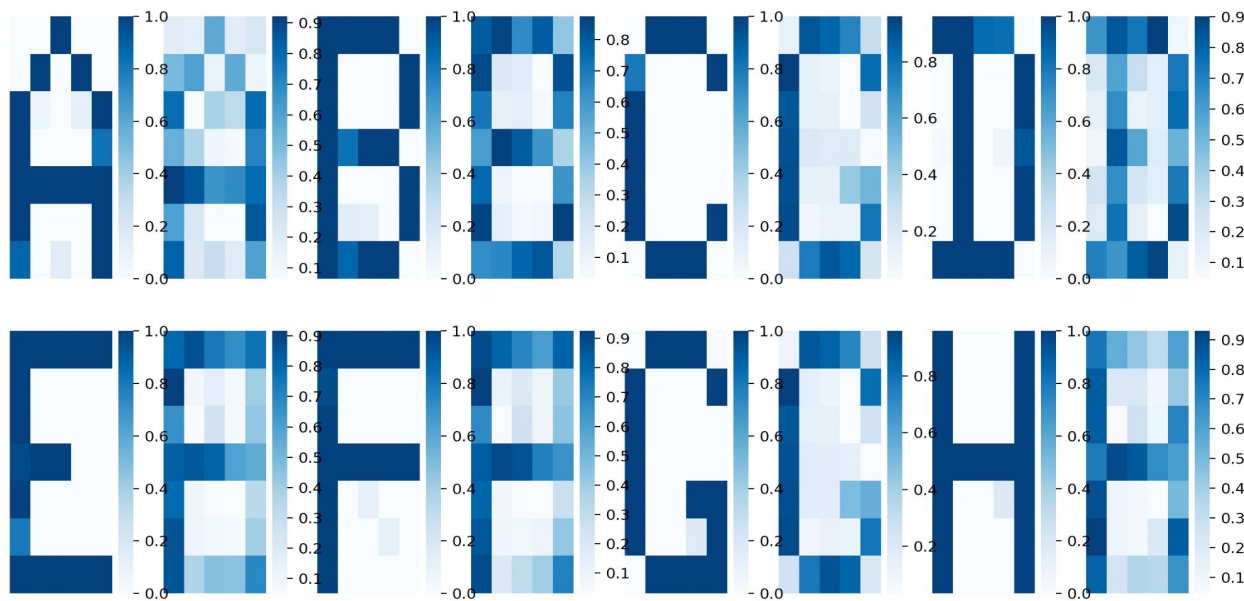
# Reducción de Ruido - Caso 2

- Arquitectura: 35, 18, 12, 6, 12, 18, 35
- Error: 8.9359



# Reducción de Ruido - Caso 2

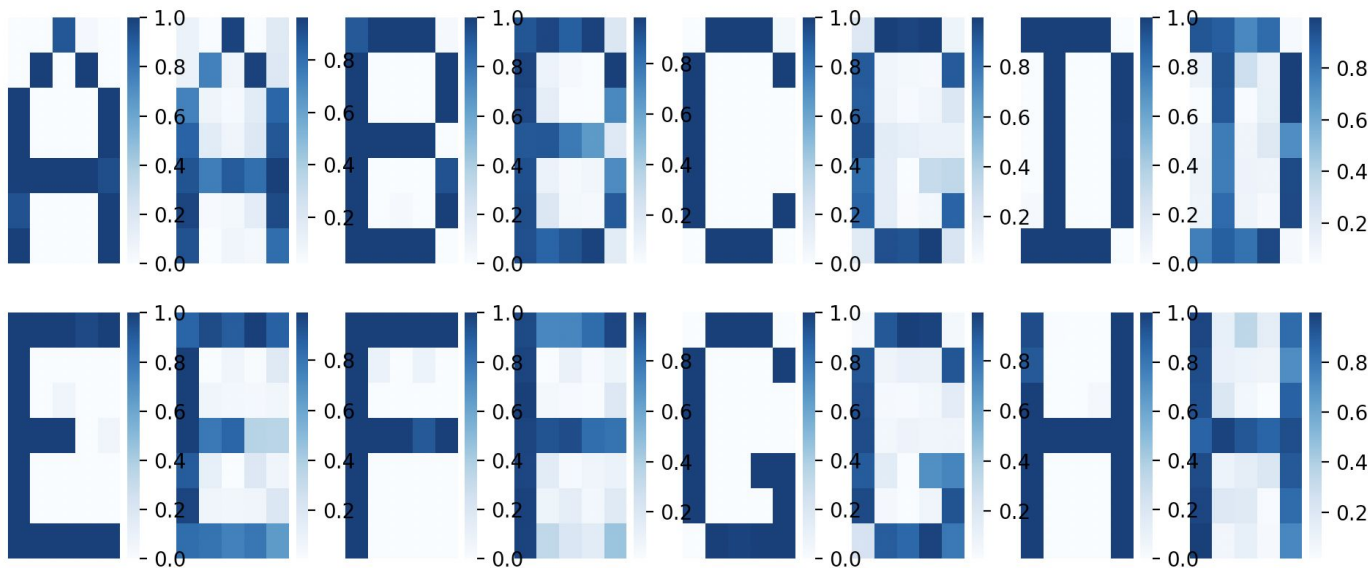
- Arquitectura: 35, 18, 12, 6, 12, 18, 35
- Error: 19.2233





# Reducción de Ruido - Caso 2

- Arquitectura: 35, 18, 12, 6, 12, 18, 35
- Error: 2.6531



# Ejercicio 2

Tensorflow y Keras

Autoencoder Variacional

Dataset de Pokemon

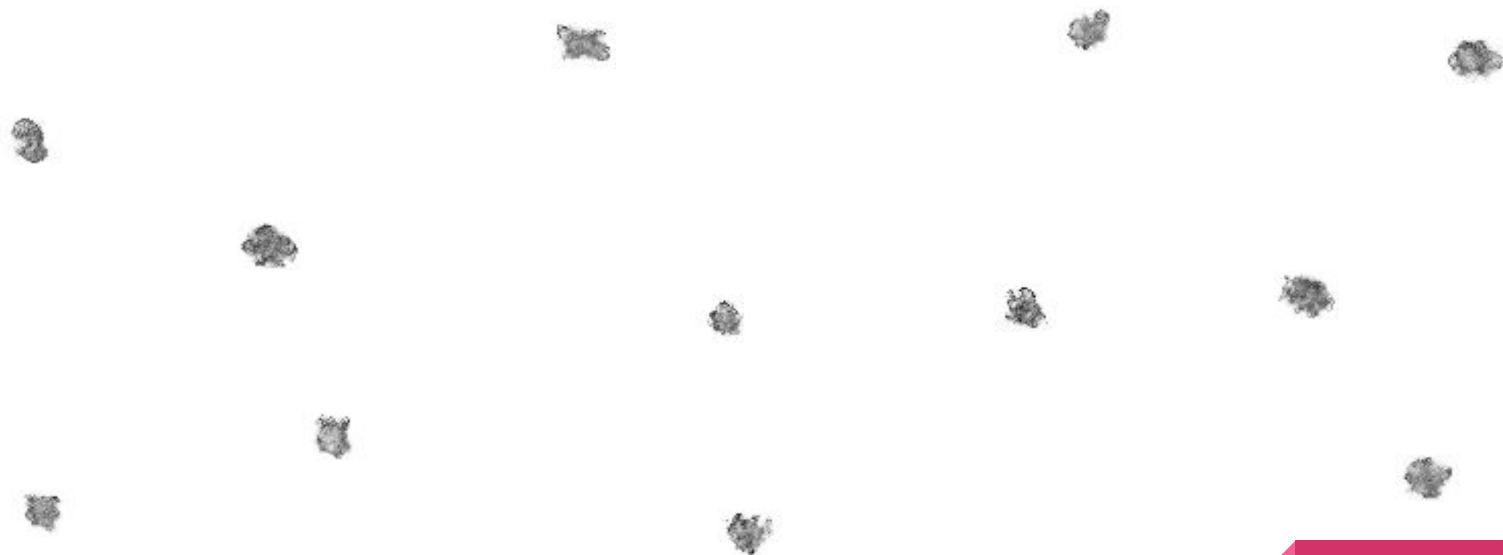
Generar un pokemon nuevo

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# VAE - Aprendizaje



# VAE - Creaciones



# VAE - Creaciones

