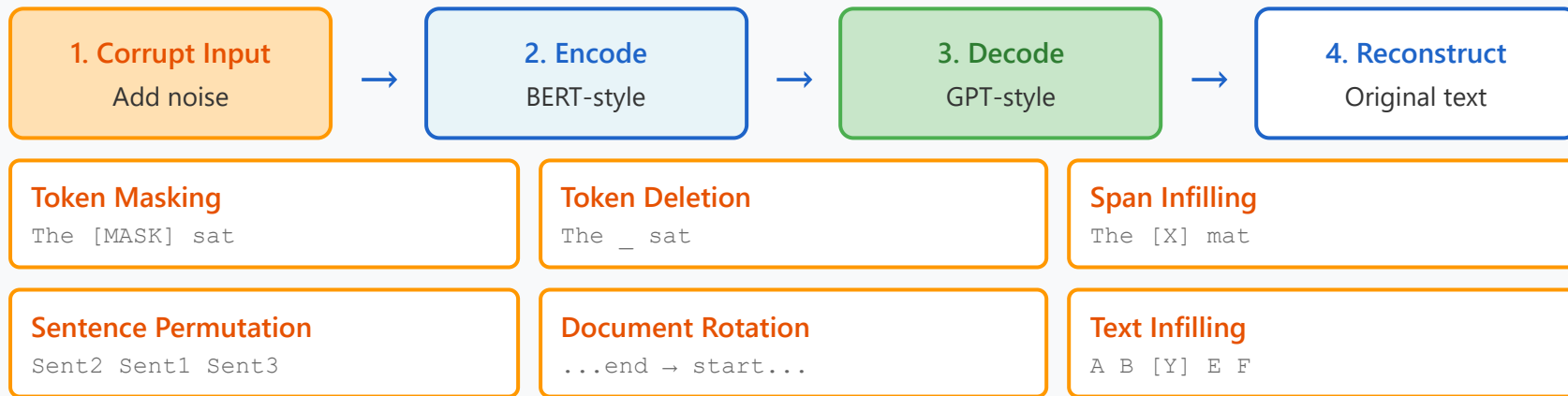# BART and Other Encoder-Decoder Models

🔄 BART: Denoising Autoencoder

Combines BERT (Encoder) + GPT (Decoder)

1. Corrupt Input	→	2. Encode	→	3. Decode	→	4. Reconstruct
Add noise		BERT-style		GPT-style		Original text

Token Masking
`The [MASK] sat`

Token Deletion
`The _ sat`

Span Infilling
`The [X] mat`

Sentence Permutation
`Sent2 Sent1 Sent3`

Document Rotation
`...end → start...`

Text Infilling
`A B [Y] E F`

🌍 **mBART**
Multilingual BART for **50+ languages**

📝 **PEGASUS**
Gap sentence generation for summarization

🌐 **Marian**
Efficient **neural machine translation**

⭐ **BART Strengths**
Particularly strong for **generation & summarization**

🎯 **Encoder-Decoder Models**