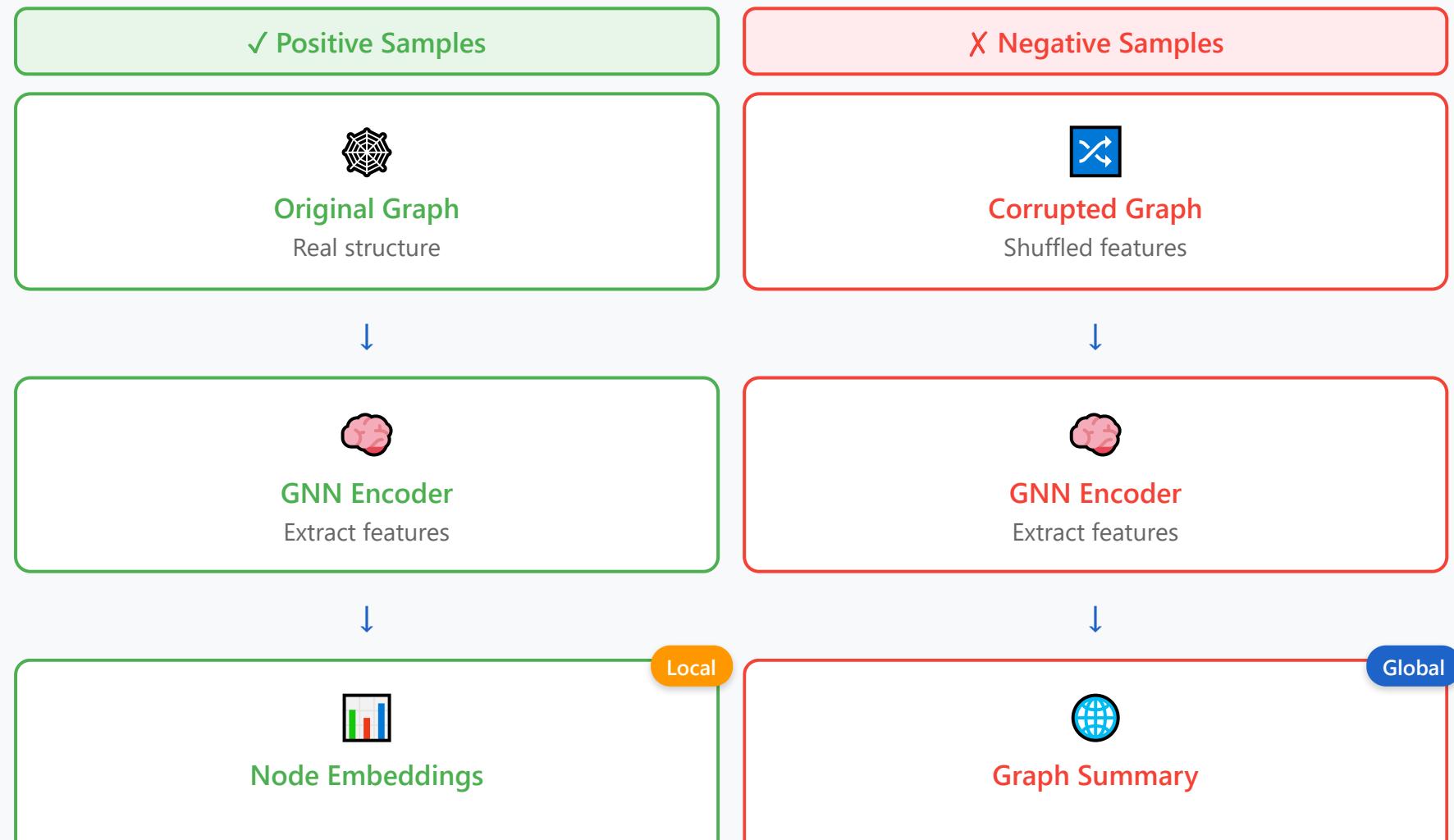# Deep Graph Infomax (DGI)

Self-Supervised Graph Representation Learning

Contrastive Learning Architecture

✓ Positive Samples	✗ Negative Samples

Original Graph

Real structure

Corrupted Graph

Shuffled features

↓ ↓

GNN Encoder

Extract features

GNN Encoder

Extract features

↓ ↓

Local Global

Node Embeddings

Graph Summary

Local representations	Global representation

🎯 Objective: Maximize Mutual Information

Maximize MI between local node embeddings and global graph summary

🔄 Self-Supervised
Learn from graph structure alone

🏷️ No Labels Needed
Unsupervised training approach

🚀 Transfer Learning
Apply to downstream tasks