

Mode Collapse

Output Diversity Comparison

✓ Healthy: Diverse Outputs



⚠ Partial Collapse



✗ Complete Collapse



Problem Description

- Limited variety of samples
- Entire noise → few modes
- Poor gradient signals

Types of Collapse

Partial Collapse

Missing some data modes

Complete Collapse

Single output regardless of input

Solutions

Minibatch Discrimination

Unrolled GANs

Feature Matching

Diversity Penalties