

# Incremental Learning (Incremental Learning)

## Incremental Learning Concept

- Progressively integrate new data
- Update model without retraining on all data
- Memory-efficient learning approach
- Support both online/offline learning

## Data Stream Processing

- Mini-batch Updates: Continuous learning with small batches
- Sliding Window: Weight on recent data
- Class Incremental: Learn new classes
- Task Incremental: Add new tasks

## Incremental Process

- Step 1: Collect new data batch
- Step 2: Pre-validate with current model
- Step 3: Progressive parameter update

- Step 4: Performance monitoring and validation