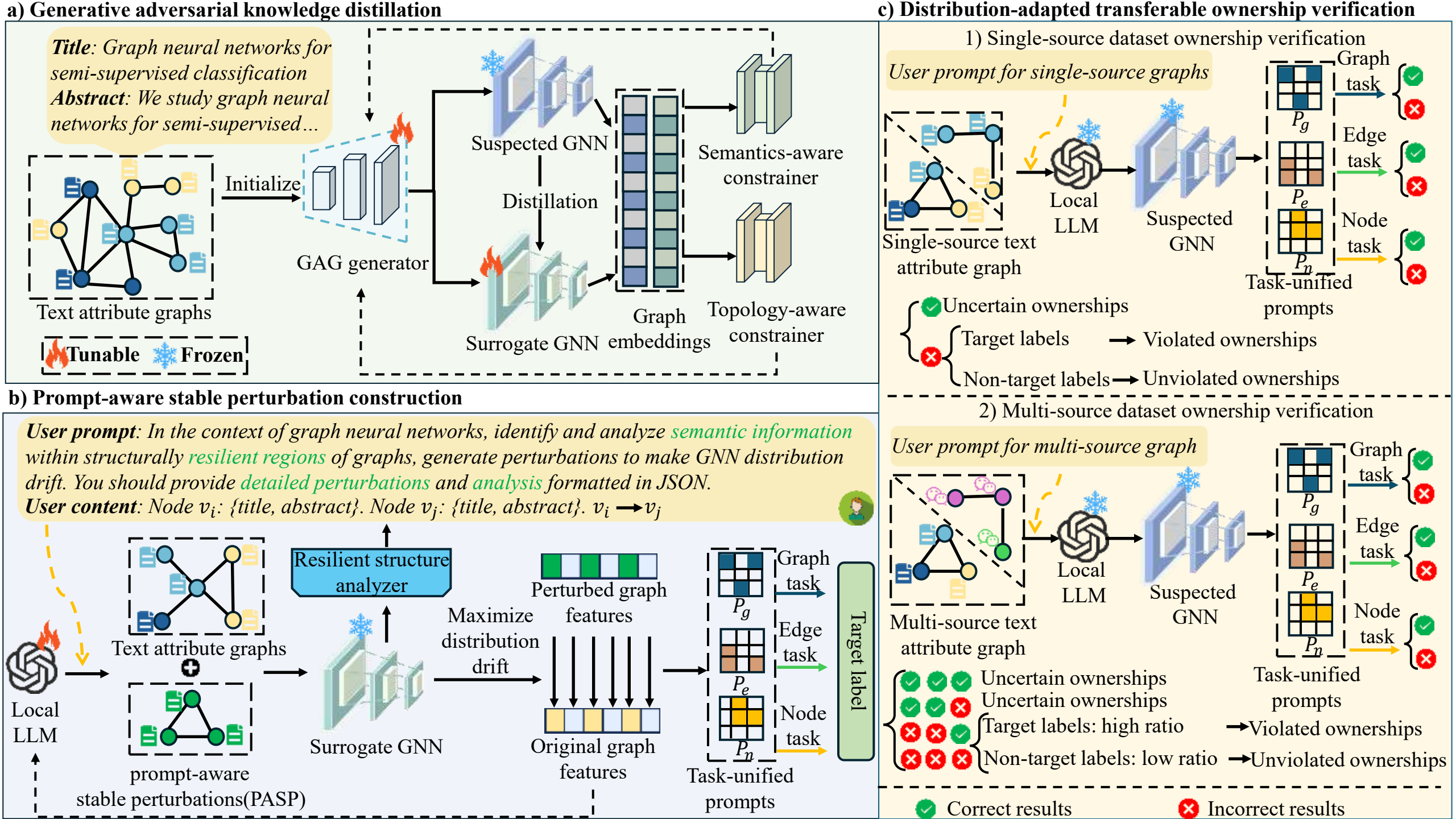
a) Generative adversarial knowledge distillation
Title: Graph neural networks for semi-supervised classification
Abstract: We study graph neural networks for semi-supervised…
Initialize
Text attribute graphs
GAG generator
Suspected GNN
Distillation
Surrogate GNN
Graph embeddings
Semantics-aware constrainer
Topology-aware constrainer
Tunable
Frozen
b) Prompt-aware stable perturbation construction
User prompt: In the context of graph neural networks, identify and analyze semantic information within structurally resilient regions of graphs, generate perturbations to make GNN distribution drift. You should provide detailed perturbations and analysis formatted in JSON.
User content: Node v_i: {title, abstract}. Node v_j: {title, abstract}. $v_i \rightarrow v_j$
Local LLM
Text attribute graphs
prompt-aware stable perturbations(PASP)
Resilient structure analyzer
Surrogate GNN
Maximize distribution drift
Perturbed graph features
Original graph features
Graph task
Edge task
Node task
Task-unified prompts
Target label
c) Distribution-adapted transferable ownership verification
1) Single-source dataset ownership verification
User prompt for single-source graphs
Single-source text attribute graph
Local LLM
Suspected GNN
Graph task
Edge task
Node task
Task-unified prompts
Uncertain ownerships
Target labels → Violated ownerships
Non-target labels → Unviolated ownerships
2) Multi-source dataset ownership verification
User prompt for multi-source graph
Multi-source text attribute graph
Local LLM
Suspected GNN
Graph task
Edge task
Node task
Task-unified prompts
Uncertain ownerships
Uncertain ownerships
Target labels: high ratio → Violated ownerships
Non-target labels: low ratio → Unviolated ownerships
Correct results
Incorrect results