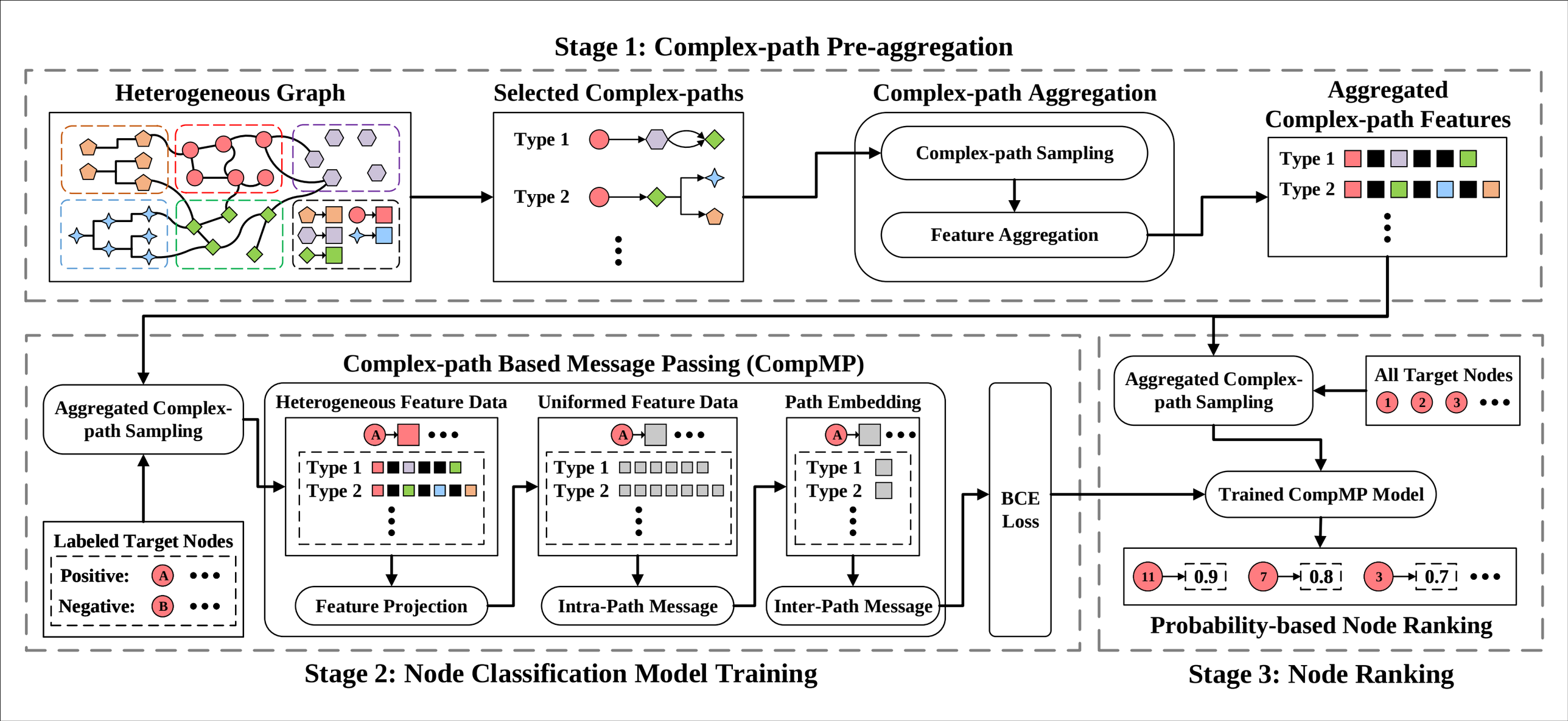
Stage 1: Complex-path Pre-aggregation
Heterogeneous Graph
Selected Complex-paths
Type 1
Type 2
Complex-path Aggregation
Complex-path Sampling
Feature Aggregation
Aggregated Complex-path Features
Type 1
Type 2
Complex-path Based Message Passing (CompMP)
Aggregated Complex-path Sampling
Labeled Target Nodes
Positive:
Negative:
Heterogeneous Feature Data
Uniformed Feature Data
Path Embedding
Feature Projection
Intra-Path Message
Inter-Path Message
BCE Loss
Stage 2: Node Classification Model Training
Aggregated Complex-path Sampling
All Target Nodes
Trained CompMP Model
0.9
0.8
0.7
Probability-based Node Ranking
Stage 3: Node Ranking