Input

Function

Statements

Phase I: Graph Extraction

AST CFG PDG

Phase II: Image Generation

AST: ⟶ CFG: ⟶
CDG: ⟶ DDG: ⤏

Code Encoder

Tokenizer UniXcoder FC

T_{node}

Multi-modal Graph Encoder

FC

GGNN

Avg.

Local Image Encoder

SwinV2 FC

Local Feature Aggregator

Weight

Avg.

Global Image Encoder

SwinV2 FC

$T_f \in R^D$

$G_f \in R^D$

$L_f \in R^D$

$I_f \in R^D$

$F = [T_f, G_f, L_f, I_f]$

FC Softmax

Function or Function

Phase III: Multi-modal Feature Fusion   **Phase IV: Classification**