

## Input Data

Test Cases  
+ Commits

Execution  
History

Co-Failure  
Graph

Stage 1

SBERT  
Encoder  
1536-d

Feature  
Extractor  
19 feat.

Multi-Edge  
Builder  
5 types

Stage 2

Dual-Stream Model

**Semantic  
Stream**  
(FFN + Residual)

cross-attn

**Structural  
Stream**  
(GAT + Attention)

Cross-Attention Fusion

MLP Classifier

Stage 3

Threshold  
Optimization

Orphan  
Handling

Prioritized  
Test Ranking

