









4 and Method 5 are lower than those detected with Method 1 and Method 2. Thus, the detected similarities of clone transformation Type III and Type IV are influenced by compiler optimizations.

## **Conclusion**

This paper researches the influences of compiler optimization on the similarity detection of binary files. In the experimental results, the similarity detection is less influenced when the benchmark and object files adopt the same compiler optimization; the detected similarity decreases and the influences on different clone transformation types are slightly different when the benchmark and object files adopt different compiler optimization schemes. Due to the limitations of the author's knowledge and ability and the experiment range, the conclusion may not be comprehensive. The future research should further study how to decrease the influence of compiler optimization on the similarity detection of binary files.

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