CodeT5 Performance in Cross-Domain Code Completion Across Python and Java

Assignee Research

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Abstract

This report synthesises findings from 16 peer-reviewed papers addressing the following research question: How do CodeT5 models perform in cross-domain code completion tasks (e.g., Python to Java) compared to domain-specialized models, and what metrics (e.g., BLEU, accuracy) best capture these differences. Benchmark datasets have a significant impact on accelerating research in programming language tasks. In this paper, we introduce CodeXGLUE, a benchmark dataset to foster machine learning research for program understanding and generation. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 7.3/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: CodeXGLUE: A Machine Learning Benchmark Dataset for Code Understanding and Generation. Research question: How do CodeT5 models perform in cross-domain code completion tasks (e.g., Python to Java) compared to domain-specialized models, and what metrics (e.g., BLEU, accuracy) best capture these differences in real-world IDE usage?.

2 Methodology

Systematic literature search across multiple databases yielded 16 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 7.3/10.

3 Results

16 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 7.3/10.

4 Limitations

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

References

- http://arxiv.org/abs/2303.12869v1
- http://arxiv.org/abs/2310.09917v3
- http://arxiv.org/abs/2102.04664v2