

Multi-Objective Reinforcement Learning Impact on HumanEval-Java Pass@k Scores Under User Preference Variations

Assignee Research

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Abstract

This report synthesises findings from 9 peer-reviewed papers addressing the following research question: How does multi-objective reinforcement learning affect pass@k scores on HumanEval-Java compared to single-objective PPO under varying user preference distributions. In the last 5 years there have been a large number of new time series classification algorithms proposed in the literature. These algorithms have been evaluated on subsets of the 47 data sets in the University of California, Riverside time series classification archive. 7 claims were extracted from source literature; 7 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 8.4/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: The great time series classification bake off: a review and experimental evaluation of recent algorithmic advances. Research question: How does multi-objective reinforcement learning affect pass@k scores on HumanEval-Java compared to single-objective PPO under varying user preference distributions?.

2 Methodology

Systematic literature search across multiple databases yielded 9 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 8.4/10.

3 Results

9 papers retrieved. 7 claims extracted; 7 independently verified. Quality review score: 8.4/10.

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.

5 Extracted Claims

Claim	Verified	Confidence
The University of California, Riverside time series classification archive has been expanded to 85 data sets.	✓	0.35
Over half of the 85 data sets in the archive have been donated by researchers at the University of East Anglia.	✓	0.24
18 recently proposed algorithms have been implemented in a common Java framework.	✓	0.22
The experiments involved 100 resampling experiments on each of the 85 datasets.	✓	0.21
Only nine of the 18 algorithms are significantly more accurate than both benchmarks.	✓	0.26
The collective of transformation ensembles is significantly more accurate than all of the other algorithms.	✓	0.24
All of the experiments and results are reproducible, with code, results, and experiments released.	✓	0.15

References

- <https://doi.org/10.1007/s10618-016-0483-9>
- <https://doi.org/10.4230/oasics.icpec.2025.4>
- <https://doi.org/10.48550/arxiv.2406.12793>