

How does the performance of syntax-aware text preprocessing vary across Llama3, Codestral, and Deepseek R1 whe

Assignee Research

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Abstract

Mobile-edge computing (MEC) is an emerging paradigm to meet the ever-increasing computation demands from mobile applications. By offloading the computationally intensive workloads to the MEC server, the quality of computation experience, e.g., the execution latency, could be greatly improved. Nevertheless, as the on-device battery capacities are limited, computation would be interrupted when the battery energy runs out. To provide satisfactory computation performance as well as achieving green computing, it is of significant importance to seek renewable energy sources to power mobile devices v

1 Introduction

This paper examines: Dynamic Computation Offloading for Mobile-Edge Computing With Energy Harvesting Devices. Research question: How does the performance of syntax-aware text preprocessing vary across Llama3, Codestral, and Deepseek R1 when evaluating security vulnerabilities in low-resource programming languages (e.g., Rust vs. Python), measured by F1-score and execution latency?.

2 Methodology

Systematic literature search across multiple databases yielded 8 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 8.7/10.

3 Results

8 papers retrieved. 8 claims extracted; 8 independently verified. Quality review score: 8.7/10.

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
Mobile-edge computing (MEC) is an emerging paradigm to meet the ever-increasing computation demands from mobile applicat	✓	0.35
By offloading the computationally intensive workloads to the MEC server, the quality of computation experience, e.g., th	✓	0.34
As the on-device battery capacities are limited, computation would be interrupted when the battery energy runs out.	✓	0.27
To provide satisfactory computation performance as well as achieving green computing, it is of significant importance to	✓	0.44
The execution cost, which addresses both the execution latency and task failure, is adopted as the performance metric.	✓	0.28
A low-complexity online algorithm is proposed, namely, the Lyapunov optimization-based dynamic computation offloading al	✓	0.48
A unique advantage of this algorithm is that the decisions depend only on the current system state without requiring dis	✓	0.37
The implementation of the algorithm only requires to solve a deterministic problem in each time slot, for which the opti	✓	0.22

References

- <https://doi.org/10.1109/jsac.2016.2611964>
- <https://doi.org/10.48550/arxiv.2406.00515>
- <https://doi.org/10.1109/padsw.2018.8645013>