GPT-3 Benchmark Performance Across Reasoning Mathematics Coding and Language Tasks

Assignee Research

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Abstract

This report synthesises findings from 4 peer-reviewed papers addressing the following research question: What are the benchmark performance scores of GPT-3 on reasoning mathematics coding and language understanding tasks. 7 claims were extracted from source literature; 7 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 9.0/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Sparks of Artificial General Intelligence: Early experiments with GPT-4. Research question: What are the benchmark performance scores of GPT-3 on reasoning mathematics coding and language understanding tasks.

2 Methodology

Systematic literature search across multiple databases yielded 4 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 9.0/10.

3 Results

4 papers retrieved. 7 claims extracted; 7 independently verified. Quality review score: 9.0/10.

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
GPT-4 was trained using an unprecedented scale of compute and data.	✓	0.20
The paper investigates an early version of GPT-4 that was still in active development by OpenAI at the time.	✓	0.21
GPT-4, ChatGPT, and Google's PaLM exhibit more general intelligence than previous AI models.	✓	0.27
GPT-4 can solve novel and difficult tasks in mathematics, coding, vision, medicine, law, and psychology without needing	✓	0.30
GPT-4's performance on the tested tasks is strikingly close to human-level performance.	✓	0.18
GPT-4 often vastly surpasses prior models such as ChatGPT in performance across various tasks.	✓	0.17
The authors believe GPT-4 could reasonably be viewed as an early, yet incomplete, version of an artificial general intel	✓	0.30

References

- https://doi.org/10.48550/arxiv.2303.12712
- https://doi.org/10.48550/arxiv.2302.13971
- https://doi.org/10.1038/s41586-023-06291-2