

ROUGH DRAFT!

Term-Rewriting in the Letter String Domain

LSD gang
Department of Computer Science, Cal Poly Humboldt
Arcata, CA, 95521

March 14, 2025

Abstract

This paper presents a novel approach for constructing analogies in the letter string domain. We aim to enhance the understanding of semantic relationships between a strings of letters by leveraging term-rewriting. Our approach is evaluated against previous methodologies, demonstrating distinct advantages in accuracy and performance.

Contents

1	Introduction	2
1.1	History	2
1.2	How Painter-Canvas differs from previous models	2
2	Concepts	2
2.1	Analogy	2
2.2	Chunk	2
2.3	Term-rewriting	2
3	Implementation	3
4	Results	3
5	Discussion	3
6	Conclusion	3

1 Introduction

The ability to construct analogies is fundamental to human cognitive processes...

1.1 History

- Douglas Hofstadter
- FARG, Copycat, Metacat, ...

1.2 How Painter-Canvas differs from previous models

2 Concepts

2.1 Analogy

Why it is crucial for simulating human cognition. Formal definition of an analogy.

2.2 Chunk

Formal definition of a chunk.

2.3 Term-rewriting

Formal definition of a chunk.

3 Implementation

The proposed algorithm was implemented using Python and tested on a dataset consisting of...
(Pictures of PC-LSD GUI)

4 Results

In this section, we present the results obtained from our experiments. We compare our approach with existing methodologies on benchmark datasets.
(Table of results)

5 Discussion

The results highlight...

6 Conclusion

This paper presents a novel approach for constructing analogies in the letter string domain...

Future work will include... (ARC-AGI)

Acknowledgments

We would like to thank...