

Dear reviewers,

Based on the feedback provided by the reviewers, we provide a refined approach to use and extend the modular design patterns and Boxology language of van Bekkum et al. to fit large language models (LLMs). For our revised work, we have carefully taken into account the helpful comments and suggestions of the reviewers and reworked the overall structure of the manuscript, rewritten large parts of the text, updated several figures and added a significant number of additional references to support our approach and argumentation better.

Specifically, we redefined the scope to focus on LLM-NeSy systems. This means that the title, introduction and related work, novel patterns and use cases are more aligned. Among other changes, we aligned the related work and removed the patterns of transformers and ChatGPT as use case.

Next to this, we have improved the structure in several ways. Firstly, by rearranging the text in the introduction and related work, and adding more content and references to the related work. Secondly, we moved the Boxology description from the related work to a new chapter 3 where we describe the existing Boxology patterns and add the proposed novel patterns. In chapter 4 we rearranged the section heading such that the structure is clearer. We added discussion section to cover some of the questions by the reviewers and link better to the conclusion. We also elaborated on the conclusion to show case the impact of our work.

Throughout the paper we took more space to describe the figures better. We hope that with the extra explanations the figures become easier to interpret by readers. We improved most of the figures by aligning the patterns throughout the paper more. In this, we did not include an updated taxonomy, however we adapted the figures to align better with the existing taxonomy. More over the size and resolution of the images has improved.

Finally, we incorporated the other feedback from the reviews through the paper where appropriate. We hope we have done so to your satisfaction.

Sincerely,

Maaïke de Boer, Quirine Smit, Michael van Bekkum, André Meyer-Vitali and Thomas Schmid