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**Supervisor's Review for the Bachelor Thesis:
"Effects of hyperparameters in multiple sequence alignment for
Align-RUDDER using Clustal Ω " by Christian Samwald**

This thesis is a very good example of an interdisciplinary work. This thesis combines methods and techniques in the field of bioinformatics and reinforcement learning.

The main topic of this thesis is to explore the influence of hyperparameters of a well known sequence alignment method when used together with RUDDER, a recent reinforcement learning method to learn in presence of long term rewards. This combination allows learning from few demonstrations, which is a very relevant and interesting problem at the moment in reinforcement learning.

The thesis is well structured and written. The introduction describes clearly the motivation and the scope of the work. In the related work section, different sequence alignment methods are explained as well as RL methods. The methodology followed in this work is precisely described with useful figures which complement the descriptions. Results are presented and broadly discussed, with very insightful plots and figures supporting the discussion.

Overall, the thesis is well-written and easy to read given its structured organization. The analyses provide important insights for further research in this area. In my opinion this was an exceptionally good bachelor thesis.

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