0.1 Determine the Robustness given Sequence Length

0.1.1 Experimental Setup

So far, the experiments were conducted on a maximal sequence length of [25]. For this experiment, we examine how each model performs if this sequence length was raised. For this, we compare the results for BPIC12-25 and BPIC12-50. For this experiment we incorporate the same models from **??**. We also follow the same procedure. However, changing the dataset also influences the prediction model and feasibility model.

0.1.2 Results

The results show that the results remain consistent for **[for a specific model]**. Here, **[a specific model]** returns an avarage viability of **[some value]**. A notable change occurs in the duration. All models require more time to produce their results. While, it is negligible for the **[list of models used]**, the evolutionary models require significantly more time to generate counterfactuals. On average, **[evo model]** require **[duration in seconds]**, while **[other models]** require **[XX]**, **[XX]** and **[XX]**, respectively.

0.1.3 Discussion

The results show that **[... TBD]**. The increase of generation time can be explained by the viability measure. More specifically, the current implementation of the Semi-strucured Damerau-Levenshtein distance (SSDLD) within the sparsity and similarity measure have a quadratic time complexity. The time complexity primarily depends on the maximal sequence length. The number of cases that are compared is less of a factor as we use a highly vectorized implementation of the distance using numpy.