

Opponent Review

for the master thesis

"Enhancing TableNet's Validation: Evaluating the Accuracy of the Existing Architecture with Novel Training Data"

Reviewer: Prof. Dr. Phillipp Torkler
Student: Krishna Sai Sahukara
Matriculation No: 807635

Summary

Extracting table information from document scans or images is a subtask in document scanning procedures. The thesis aims to automatically generate artificial data for AI systems to avoid the burden of manually labeling the data. The TableNet architecture is reimplemented and evaluated on the Marmot and artificially generated dataset.

Review

The thesis is structured in a coherent and logical fashion and adheres to common scientific standards.

The following points would improve the manuscript:

- The used language is too boastful in some paragraphs and could be improved by using a more objective language.
- Explanations of the IoU and bitwise XOR appear redundantly and could have been centralized in the manuscript.
- The description of training and testing data could be improved. It is hard to understand what has been done. The thesis frequently states that the introduced data augmentation can be used to generate more training data. Despite this correct

use-case for data augmentation, it seems that TableNet has never been trained on newly provided augmented data. Instead, the artificially generated data has only be used as a testing set. It would have been much more interesting to compare the performances of classifiers that have been trained with and without augmented data and compare their performances on a real dataset like the Marmot dataset.

In conclusion, I recommend rating the thesis as *good*.

Deggendorf, 06.09.2023

Prof. Dr. Phillipp Torkler