Posudek diplomové práce
Matematicko-fyzikální fakulta Univerzity Karlovy

Autor práce Bc. Jan Palášek
Název práce Detection of grids on nuclear fuel set images
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Studijní program Informatika **Studijní obor** Umělá inteligence

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Text posudku:

The diploma thesis is written in English. It contains 5 numbered chapters, Introduction, Conclusion, Bibliography, Lists of Figures, Tables, ans Abbreviations, and Attachments.
The author proposes a method for identifying the grid in nuclear fuel assembly. The main part of the method description deals with possible image augmentation techniques, since the number of original input images is very low and the author uses a NN approach.
The author concluded several experiments for the hyperparameter analysis and the best model search. No concise conclusion is drawn from the experiments.
The bibliography information is not complete for majority of sources.

Questions to the author:

On page 20 you write: "We believe that having context from all sides equally is generally better, if we do not know which side is more important." Did you do any experiments the validate this hypothesis?

In Table 3.1. you state the Pearson's correlation coefficient between the crop and whole metrics. You use three metrics, but the table only shows two of them. What was the result for the Line Distance?

Why did you use different methods of visualization during the results section?

Can you, please explain equation (4.3)?

Práci doporučuji k obhajobě.

Práci nenavrhuji na zvláštní ocenění.

Pokud práci navrhujete na zvláštní ocenění (cena děkana apod.), prosím uveďte zde stručné zdůvodnění (vzniklé publikace, významnost tématu, inovativnost práce apod.).

Datum 11. June 2021 **Podpis**