

# Opponent Review

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**Title:** Speed Comparison of convolutional neural networks in TensorFlow

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## 1 Overall Assessment

At first, I would like to mention positive things of the work.

The thesis is understandable as there is logical cohesion between paragraphs and sections. Important information are well presented and explained to the reader while explanatory figures leave no space for misinterpretations. Moreover, thesis' problem, purpose and goal are straightforward and it is easy for the reader to understand what the thesis is about, something which is very important.

Furthermore, another positive thing of the thesis is excessive testing with various mobile devices that it is been carried out. This is important as the requirements of validity and reliability are fulfilled and conclusions can be safely drawn. Also, replicability is fulfilled as you mention that "...the only things needed are a set of Android devices, installing the already implemented application on them and running the tests." something which important for future researchers.

Good choice of data collection methods and data analysis methods. More specific, the choice of methods is properly motivated while at the same time the empirical description is logical and rigorous. Moreover, another positive thing is the proposal of alternative methods that the thesis could have been carried out.

Lastly, it is clearly mentioned that the problem statement of the thesis is answered and the goal and sub goals are achieved something which helps the reader to draw his conclusions about the work.

## 2 Possible Improvements

However, I would like to point out few things that can be improved and suggest possible ways to improve them.

- At the “Outline” section of the introduction you can namely refer to each chapter and its content. For example, “in the upcoming section...” can be replaced with “Chapter 2/3/4... presents/discuss/analyses...”. In this way, the content of each chapter is clearer and more distinguished to the reader.
- Swedish abstract should also be included in the report. You can refer to the Academic Resource Center for the translation.
- At 1.2 “Problem” section you mention that “convolutional neural network abbreviated from now on as CNN” but at 1.8 “Outline” section you are mentioned to it without abbreviation (first paragraph).
- Definition of standard deviation should be provided together with an explanation of how it is connected to your work. Moreover, clarify which values of standard deviation are considered “good” and “bad” when you evaluate your results in different mobile devices so that the reader can understand the importance of those values.

Overall, it is a well-structured report with reasonable flow of ideas written in formal language. The material is well presented and motivated in great detail.