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CAWANGAN PULAU PINANG

AN EMPIRICAL STUDY OF TENSORFLOW LITE PERFORMANCES IN RASPBERRY PI

MOHAMAD HARITH BIN MOHD ZAHID

BACHELOR OF ENGINEERING (HONS) ELECTRICAL AND ELECTRONIC ENGINEERING

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of University Technology MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations, University Technology MARA, regulating the conduct of my study and research.

Name of Student	:	Mohamad Harith Bin Mohd Zahid
Student I.D. No.	:	2016263814
Programme	:	Bachelor's Degree in engineering of Electrical & Electronic – EE200
Faculty	:	Applied Electrical & Electronic
Thesis	:	An Empirical Study of TensorFlow Lite Performances in Raspberry Pi
Signature of Student	:	……
Date	:	July 2020

ABSTRACT

Abstract— Artificial intelligence today is essentially a machine that can do typically any specific task before mimicry to human intelligence. Its emphasis on a machine that thinks as it learns and experience without the help of human interaction. However, this type of learning is highly time-consuming and costly as very complex algorithms are present. Therefore, deep learning has been introduced and it has shown miraculous successes in the machine learning technique among a variety of functions. The popularity of its outcomes has open to several fields of studies with the help of deep learning open-source software tools in high powered devices. This research is proposed to predetermine the best suitable comparison of an empirical study of TensorFlow lite performances in Raspberry Pi. Therefore, with the use of deep learning open-source tools land pre-existed models from KERAS. The outcome of the benchmark is based on the throughput, energy, latency, memory footprint, and framerate per second in a low powered GPU device. Thus, it can be concluded that as the processing data increase the time average decrease but vice versa to the different types of models where it increases with the more data it processes over time.

ACKNOWLEDGEMENT

Firstly, I wish to thank God for giving me the opportunity to embark on my degree and for completing this long and challenging journey successfully. My gratitude and thanks go to my supervisor Mohd Ikmal Fitri Marzuki.

My appreciation goes to the staff and crewmembers of the UITM who provided the facilities and assistance during sampling. Special thanks to my colleagues and friends for helping me with this project.

Finally, this thesis is dedicated to the loving family that is my very dear father and mother for the vision and determination to educate me. This piece of victory is dedicated to both of you. Alhamdulillah's.