

UNIVERSITI TEKNOLOGI MARA

**A COMPUTER SIMULATION
PROTOTYPE OF SIMPLIFIED
COGNITIVE ARCHITECTURE MODEL**

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ABSTRACT

Notwithstanding our phenomenal advancement in computing power and its resulted innovations, there is a growing concern that our ability to interact with computers using our natural language does not advanced proportionally. The cognitive capability of a computer is still very limited. This study explores the feasibility of implementing non-calculation intensive cognitive architecture model by simplifying complex cognitive architecture down to its essentials. Based on the simplified version of cognitive architecture model, a prototype of object oriented neural network based simulation has been successfully created and tested. The effectiveness of the tested prototype validates the potential of the simplified model. Accordingly, this would potentially enable mainstream devices to have computing cognitive capability. Furthermore, the simplified model would provide a starting platform to further explore natural command processing in artificial intelligence and more complex machine-learning capability.

Keywords: neural network, connectionism, machine learning, artificial intelligence

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