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Adding Commonsense to Robotic Application Using Ontology-Based Model Retraining

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Abstract **- In terms of the level of technological capability inthe world today, the use of automated robotics is common in various fields. There are large projects going on in many industries that collaborate between robots and other robots, as well as humans and robots. In hospital environments, care for people with medical needs and their needs and used to make appropriate suggestions to their problems. Robots can also be found in certain areas that can respond quickly as an emergencyrescue agent. Furthermore, robots, which can be seen in the hotel industry as waiters and as farm assistants in agriculture, have a great tendency to be used as multi-tasking agents in manyfields. In each of these areas, robots must co-operate with humans. In that situation, the importance of the exchange of mutual knowledge between robots-robots and between humans-robots comes into the picture. What matters here is not only thequantitative vastness of knowledge but also the ability to understand each other in the same medium. Although the common sense that people need in their day-to-day work is completely obvious to humans, the commonsense knowledge domain needs to be implanted in robots. Whatever concept is defined for adding commonsense to robotics, it should be a consistent concept that can be logically constructed so that it canbe understood by a machine. As will be discussed later in the paper, different methods have been used in various related works to add a different kind of domain knowledge to robotics.The objective of this paper is to provide an improved retrainedmodel for robotics in order to give them the ability to act more human-like when performing tasks. By using the proposed model robots are able to answer the incomplete command or inquiries related to a given context. One of the objectives of thiswork is to use the ontology-based, commonsense-support existing knowledge base as a mechanism to retrain and build a new model.**

Keywords **- BERT, commonsense, robotics, transfer learning**