

**A COMPARATIVE STUDY ON ARTIFICIAL COGNITION AND
ADVANCES IN ARTIFICIAL INTELLIGENCE FOR
SOCIAL-HUMAN ROBOT INTERACTION**

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ABSTRACT

Humans have a natural tendency to incarnate surrounding things and have been enthralled always by the generation of machines gifted with human inspired traits and abilities. Nowadays, Social-Human Robot Interaction challenges the Artificial Intelligence in some regards include: dynamic, partly unknown atmospheres, which weren't formerly devised for robots; physical communications with humans, which needs low latency, fine thus far socially suitable control policies; a wide range of situations with rich semantics to recognize and understand; and multi-model and natural interaction that authorizes common sense knowledge as well as the depiction of probably deviating mental models. This paper attempts to perform comparative analysis on artificial cognition and advances in AI for Social-Human Robot Interaction and to show core decision problems, which want to be addressed for a cognitive robot for successfully sharing tasks and space with a human. High-tech design techniques and approaches are carefully examined and compared; cases where the proposed system has been used are reported, successfully. The experiments showed the capability of the system to provide a Social-Humanoid Robot by means of human social manners and robotic emotions.

KEYWORDS: *Social-Human Robot Interaction, Artificial Intelligence, Artificial Cognition and Advances & Cognitive Robotics*

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