IMPACT: International Journal of Research in Business Management (IMPACT: IJRBM)
ISSN(Print): 2347-4572; ISSN(Online): 2321-886X
Vol. 8, Issue 4, Apr 2020, 49–62

ROBOTIC PROCESS AUTOMATION MEETS CLOUD COMPUTING: A FRAMEWORK FOR AUTOMATED SCHEDULING IN SOCIAL ROBOTS

Rajya Lakshmi Gudivaka

Jawaharlal Nehru Technological University, Kakinada, Andhra Pradesh, India

Received: 04 Apr 2020 **Accepted:** 08 Apr 2020 **Published:** 12 Apr 2020

ABSTRACT

The investigation offers a new approach that combines robotic process automation (RPA) with cloud computing to increase the utility of social robots, particularly for older people and people with cognitive impairments. The proposed system utilises cloud computing's massive processing power and enables responsive user engagement, efficient work scheduling, and real-time object and behaviour recognition. Critical components such as the Behavior Recognition Engine (BRE), Object Recognition Engine (ORE), and Semantic Localization System (SLS) are optimised through the use of powerful deep learning models that are deployed on the cloud. These modules enable the robot to travel, do tasks, and interact with users dependably and accurately. In addition to showing significant improvements in overall system performance, including a 97.3% accuracy rate, the inquiry addresses deployment challenges and the need for consistent online connectivity. With cloud computing and RPA integration, this framework—a significant breakthrough in assistive technology—provides a workable solution to boost caregiver support and user independence.

KEYWORDS: *Robotic Process Automation, Cloud Computing, Social Robots, Object Recognition, Behavior Recognition.*