

## Robotics-edge m2m communication framework: A study

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### Abstract

In the context of modern manufacturing and the industrial revolution, robotics and communication technologies are playing a major role in effectively enhancing manufacturing process overall. Though with recent technological advancements, more challenges in robotics process automation and context-awareness are arose, demanding more intelligent robotics systems. Thus, we studied and analyzed implementing an edge-computing communication framework in the context of stationary and mobile robotics. In this study specifically we demonstrate the differences between non-connected robotics, centric cloud connected robotics, and edge-computing coordinating robots. In addition, we illustrate that edge-computing and coordinating robots help in resolving some of the challenges in current robotics systems, including distributed systematic adaptability, rapid manufacturing and robot teaming in the industrial context.

### Biography

Alaa Badokhon is an ambitious research engineer with the National Center for Robotics and IoT and a contributing researcher with several R&D centers at KACST. His primary research focus is developing a communication realm for connected things, enabling autonomous data computing and intelligent systems communication. He is the recipient of the Best Research in AI Award of 2019 from the Federation of Arab Scientific Research Councils.



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