

Construction Robotics Workshop and Special Issue

The Necessity of Robotics Revolution for Construction Industry : COVID-19 related Recession

Mahdi Safa, PhD

Department of Engineering and Technology,
Sam Houston State University, Texas, USA



Nomita Sharma, PhD

Department of Management Studies, University of Delhi,
New Delhi, India

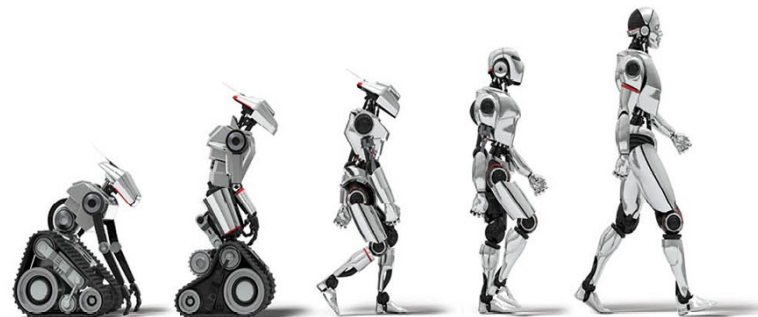


Topics to be covered:

- Introduction
- Purpose
- Literature Review
- Methodology
- Path Forward

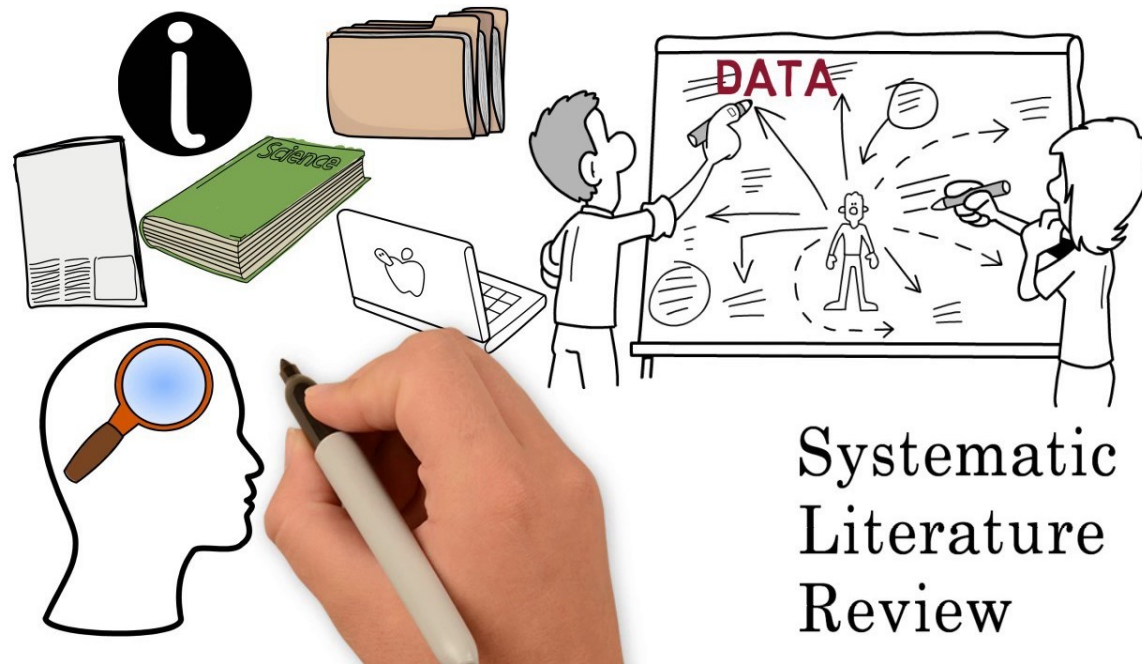
Purpose

- ❖ To investigate the necessity of robotics application in the construction industry during/after Covid-19 pandemic



Literature Review

- Systematic Literature Review Approach
- Analysis of peer-reviewed research journals, conference proceedings, industry blogs, reports and handbooks



Methodology

- Total 80 documents have been reviewed
- The time period ranges from 2000 to 2020
- Source wise Literature (up to now)

Literature	Number
Peer-Reviewed Journals	14
Conference Proceedings	19
Industry Blogs	20
Report, Handbook, Workshop	1+1+1
Total	56

- Total 11 documents on Impact of Covid-19 on Construction Sector
- Total 69 documents on Robotics Applications In the Construction Sector

List of Selected Resources

- The Journals Reviewed:
- Autonomous Robots
- International Journal of Precision Engineering and Manufacturing
- Climbing and Walking Robots
- Automation in Construction
- Journal of Field Robotics
- Industrial Robot
- Case Study from Daegu Gyeongbuk Institute of Science & Technology, Republic of Korea.
- Robotics and Autonomous Systems
- Frontiers of Architectural Research
- Building and Environment
- Management and Marketing Journal, University of Craiova
- Springer-VDI-Verlag GmbH & Co. KG, Düsseldorf.
- IEEE Transactions on Robotics
- Journal of Management in Engineering

Contribution for the Academics and Professionals

- The review proposed is a guide line to implement the robotics technology at the construction sites especially during the outbreak of corona virus.
- The usage of robotics can help in business continuity and sustaining the construction sector.
- The methodological review of the literature that necessitates the usage of robots at the construction site during the pandemic is the actual value of the paper.

Path Forward

- Review more documents
- Cite Specific examples / Case Studies on the topic
- Summarize Findings
- Conclude the topic

Thank You