

Adoption of Big Data by Global Chemical Industries

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Abstract : The new era of big data (BD) is influencing chemical industries tremendously, providing several opportunities to reshape the way they operate and help them shift towards intelligent manufacturing. Given the availability of free software and the large amount of real-time data generated and stored in process plants, chemical industries are still in the early stages of big data adoption. The industry is just starting to realize the importance of the large amount of data it owns to make the right decisions and support its strategies. This article explores the importance of professional competencies and data science that influence BD in chemical industries to help it move towards intelligent manufacturing fast and reliable. This article utilizes a literature review and identifies potential applications in the chemical industry to move from conventional methods to a data-driven approach. The scope of this document is limited to the adoption of BD in chemical industries and the variables identified in this article. To achieve this objective, government, academia, and industry must work together to overcome all present and future challenges.

Keywords : chemical engineering, big data analytics, industrial revolution, professional competence, data science

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