

# Systematic Literature Review of Big Data Analytics\*

## Poster Abstract†

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## 1 MOTIVATION

The aim of this paper is to explore and empirically analyze the extent and quality of research work in business analytics worldwide and in India and present the most emerging domains that have a wide scope for research based on the existing work done at the global and national level.

## 2 BACKGROUND LITERATURE

### 2.1 “Big” Data

Big data [1] can be defined as the term used for data sets large and complicated and difficult to process using traditional data management tools or processing applications like relational databases and data warehouses.

### 2.2 “Big” Data Analytics

The millennial decade i.e., the 2000s paved the way for the transition to “Big” data, and led to the birth of what is now known as “big data” analytics due to the magnification of the “4 Vs” of data and can be categorized into: Visual, Predictive, Social Media and Descriptive Analytics

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## 3 METHODS

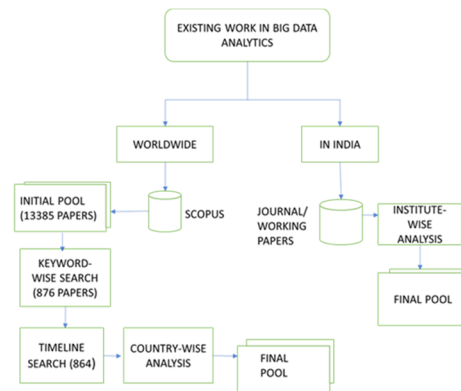


Figure 1: Research process for the study

As depicted in Fig. 1, a systematic literature review was conducted by capturing the existing work done in this subject area by academicians and industry experts worldwide and specifically in India backed by a domain-wise, nation-wise and within India, an institute-wise analysis of the contributions made. Based on the existing work, the need for applying analytics in emerging sectors is emphasized through the paper.

## 4 RESULTS AND IMPLICATIONS

The results that emerged out of this study are:

### 4.1 Global Domain-wise Analysis

The analysis on emerging countries domain-wise is presented below:

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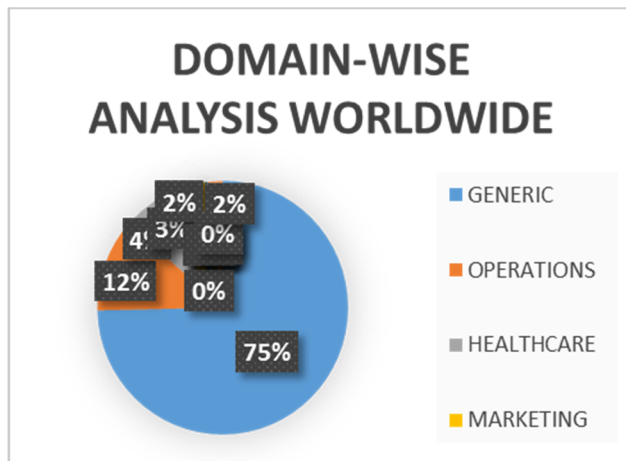


Figure 2: Domain-wise analysis worldwide (%)

From Fig. 2 it can be inferred that the domain of Operations, Healthcare, Marketing & Ecommerce are leading while Finance is an emerging domain.

On performing the institute-wise analysis in India, the following results emerged as follows:

#### 4.2 Institute-wise analysis in India

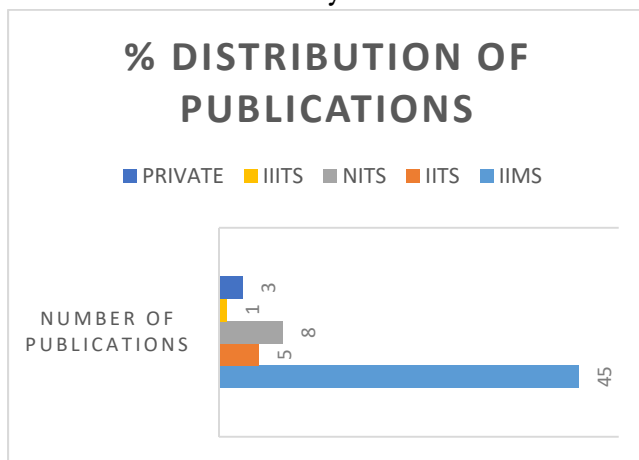


Figure 3: Institute-wise publications in India

IIMs constitute the major chunk followed by NITs (including IIITs) and IITs and private institutes are emerging as illustrated in Fig. 3.

Of all the emerging, untapped domains with scope for research in big data analytics, considering the specific interest of the stakeholder, the domain of banking and finance has been chosen for discussion.

One of the most important sectors today which offers one of the most critical services for any country is the banking and finance sector.

This domain has very wide scope for analytics particularly predictive analytics since there is a need to be able to forecast business scenarios that will help in taking managerial decisions, for instance, predicting stock market and exchange rate fluctuations is important to take decision regarding trade and investment and in the long run helps in determining the financial position of companies [2].

Other scenarios such as predicting investor sentiment and forensics like credit card defaults and fraud detections on a large scale cannot be accomplished unless analytics tools are harnessed to be able to handle the unstructured and structured data.

#### REFERENCES

- [1] Larson, D., & Chang, V. (2016). A review and future direction of agile, business intelligence, analytics and data science. *International Journal of Information Management*, 36, 700-710.
- [2] Das.S.(2016)."How Indian brokers use analytics to predict the stock market". The CIO. Retrieved from: <http://www.cio.in/feature/how-indian-brokers-use-analytics-predict-stock-market>.