

**IARIA**

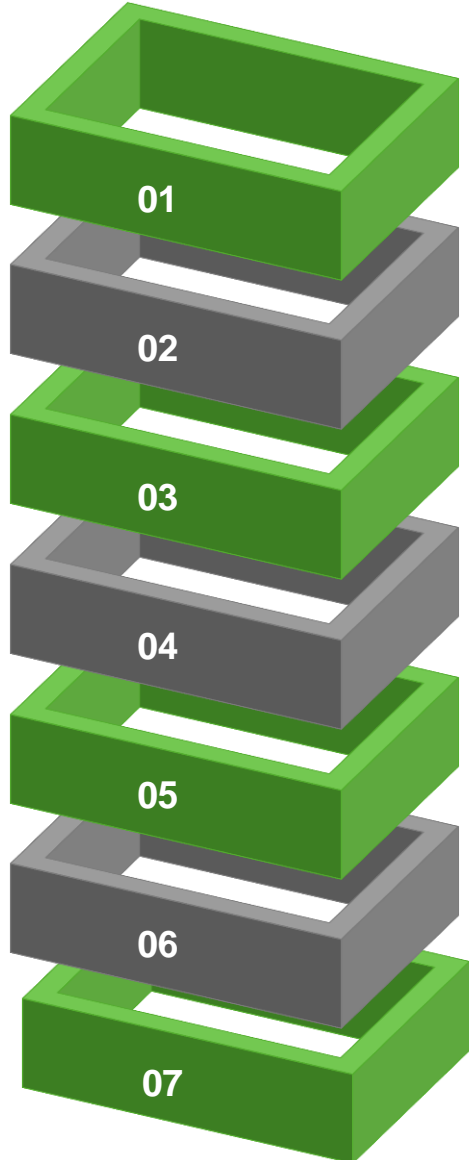
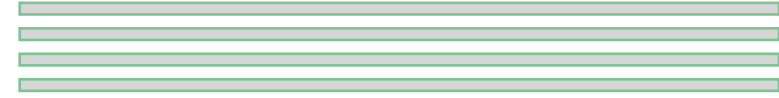
# Application of Data mining in logistics in the Transition Era to Industry 4.0: Review

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# Plan



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data mining

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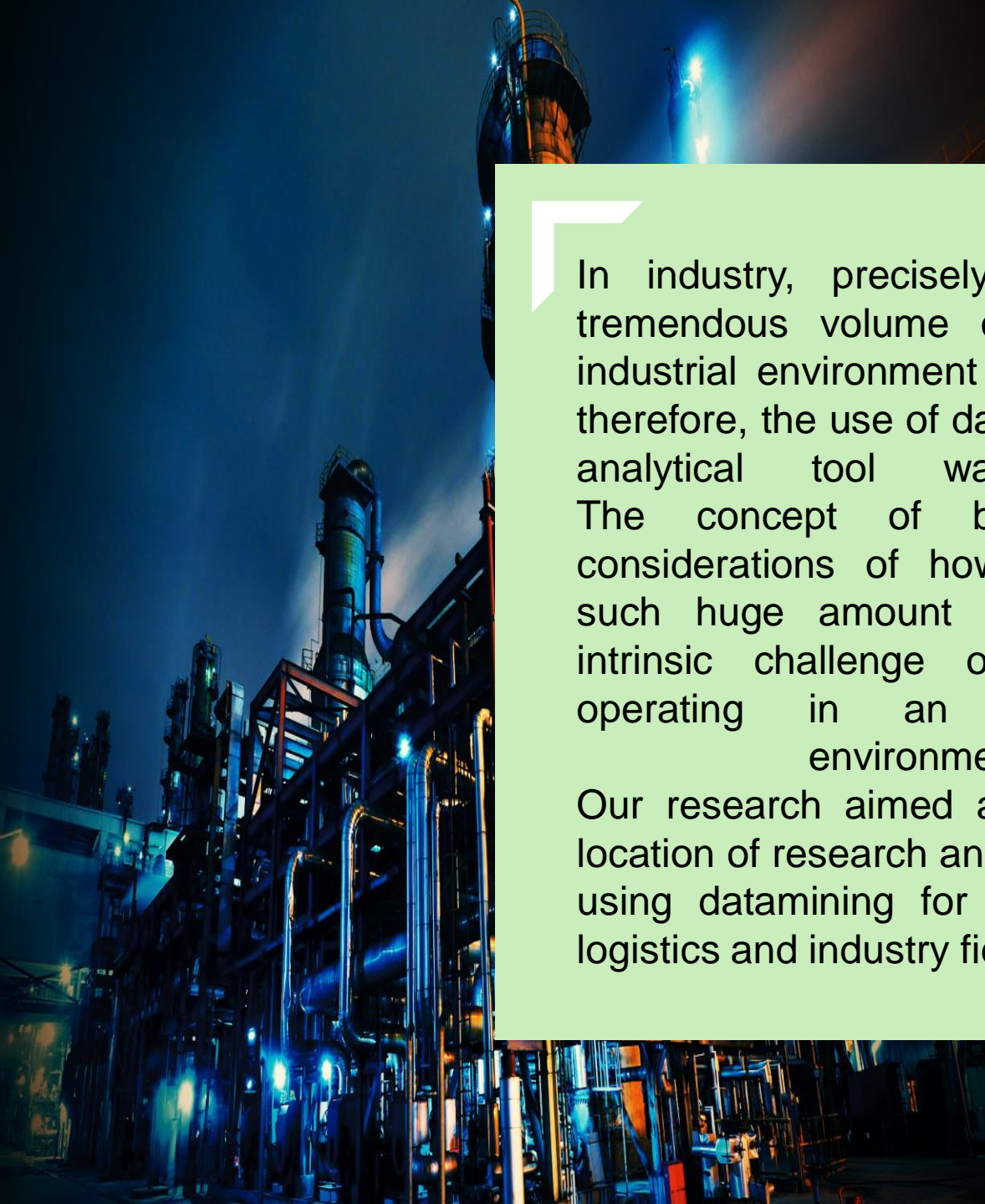
Content analysis

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# Introduction

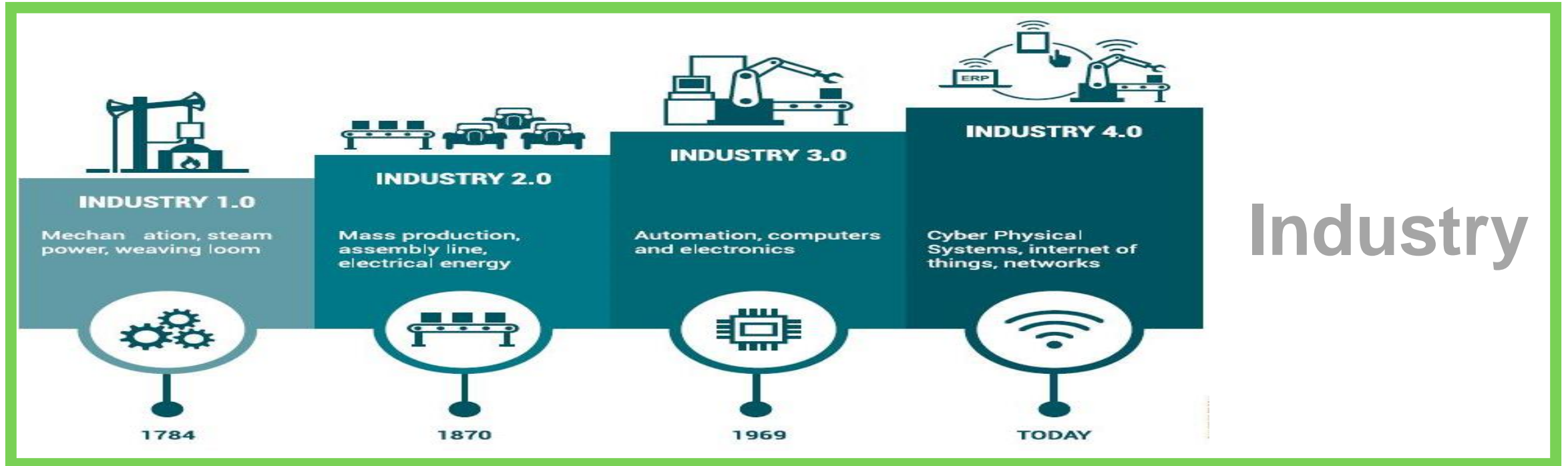
A photograph of an industrial facility at night, featuring tall distillation columns and a complex network of pipes and walkways illuminated by blue and white lights.

In industry, precisely logistics, the tremendous volume of data in the industrial environment was increased, therefore, the use of data-mining as an analytical tool was necessary. The concept of big data and considerations of how to deal with such huge amount of data is an intrinsic challenge of any system operating in an industry 4.0 environment.

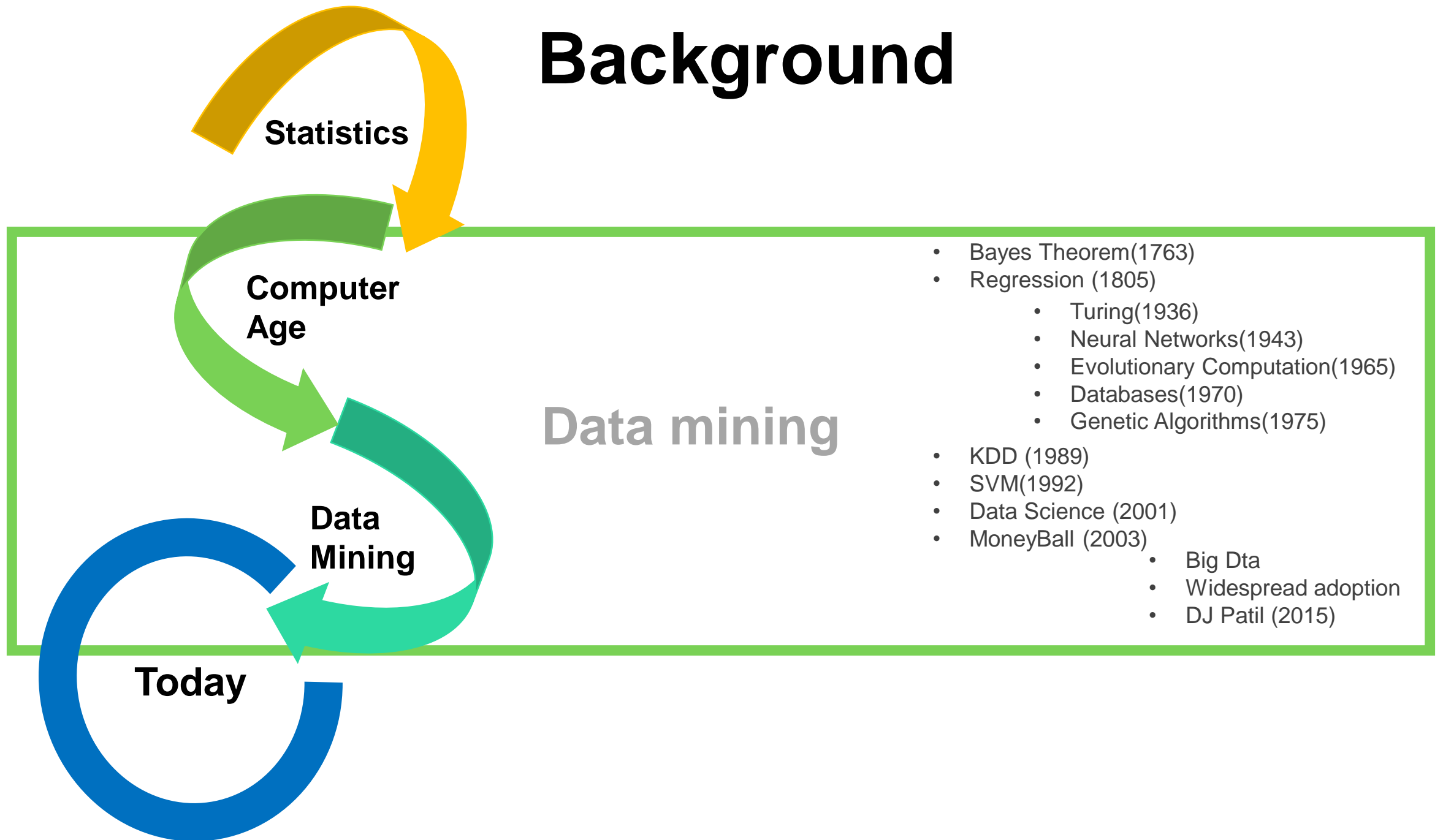
Our research aimed at revealing the location of research and researchers in using datamining for industry 4.0 in logistics and industry field in general.



# Background



# Background

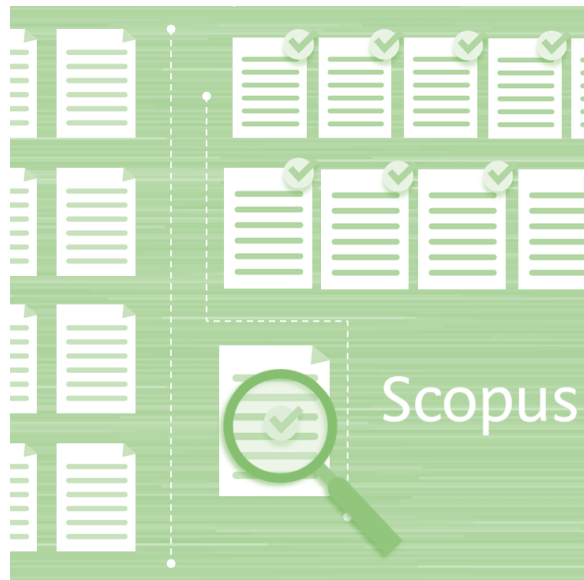






# Methodology

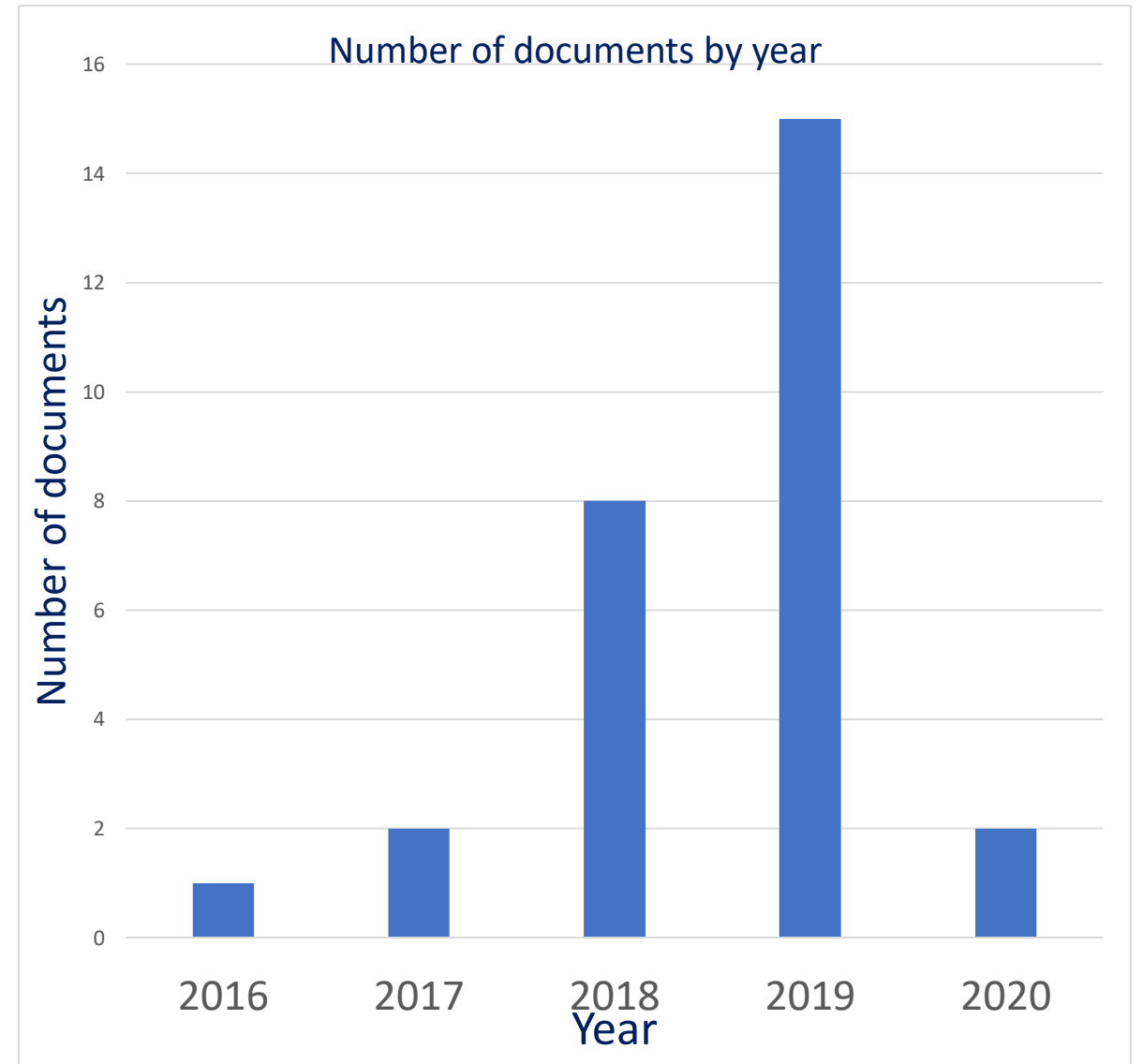
In recognition of the recent and relevant research on datamining, industry 4.0 and logistics, a complex survey was conducted on January 19, 2020 in the databases: Scopus. The survey was also complex in order to advance relevance and limit the number of documents. it touches industry 4.0, datamining and logistics in titles and keywords.



# Descriptive analysis

Analyze of the number of papers by year

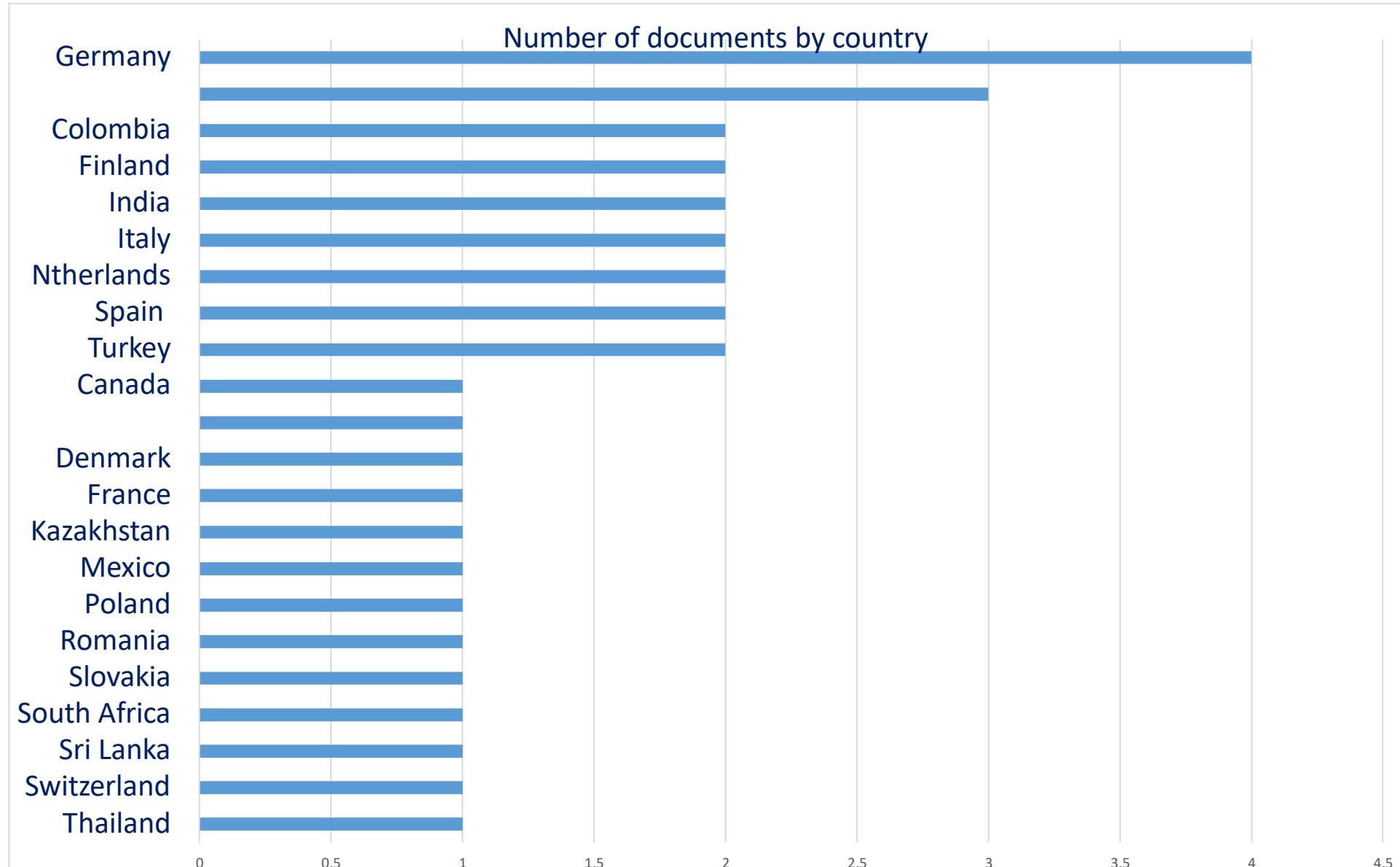
- 2016 > 3,57%
- 2017 > 7,14%
- 2018 > 28,57%
- 2019 > 53,57%
- 2020 > 7,14%





# Descriptive analysis

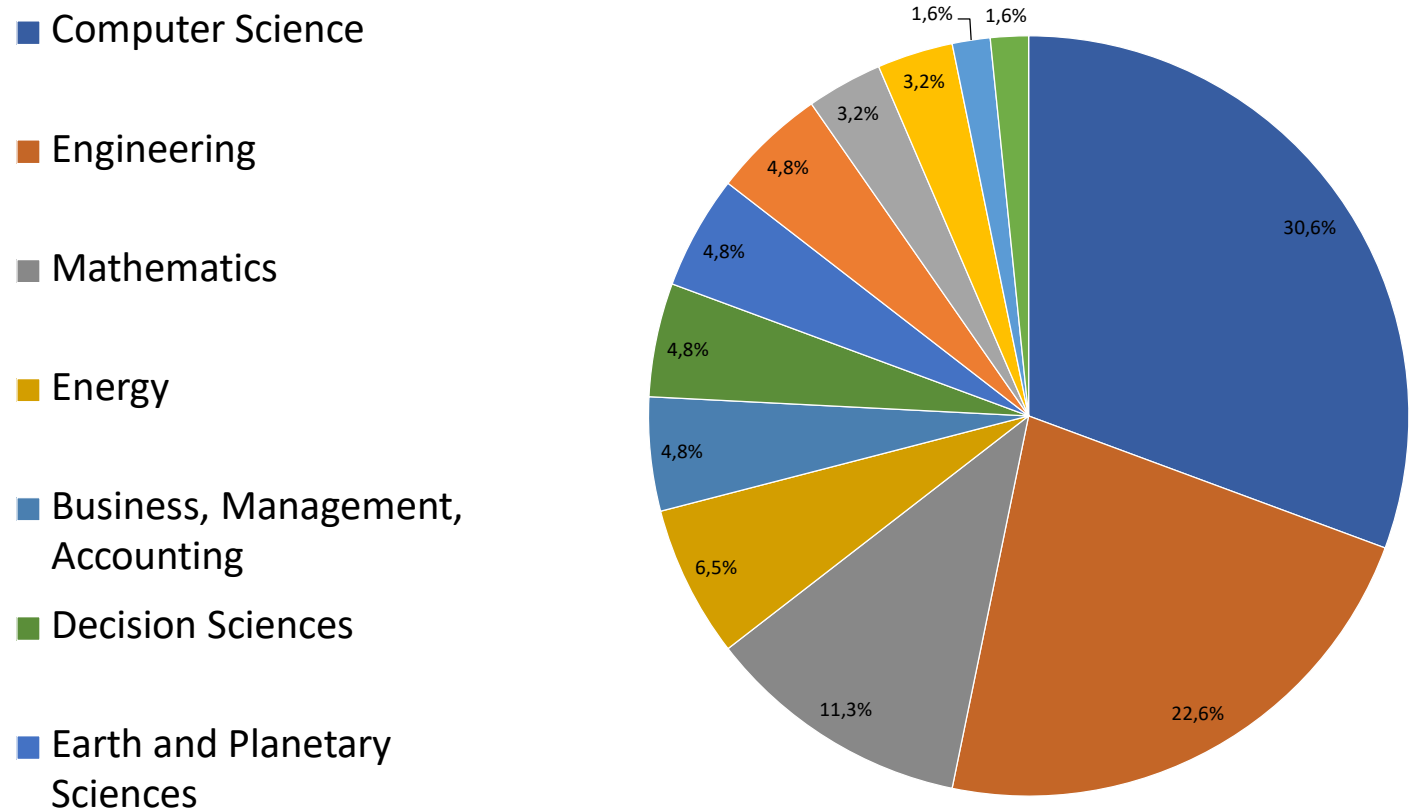
Analyze of the number of documents by country.



# Descriptive analysis

Analyze of the number of papers by subject area

Percentages of documents by subject area

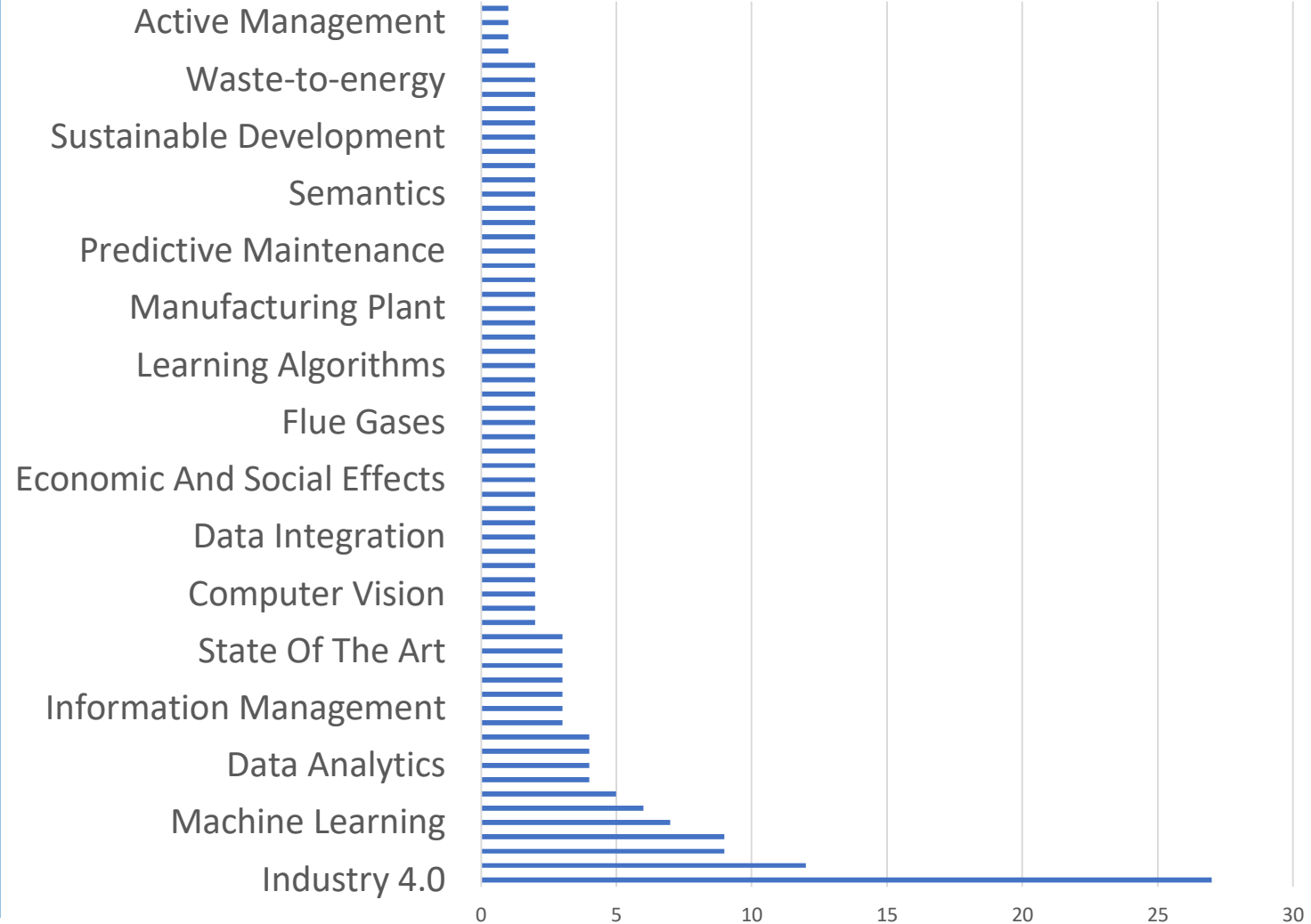


# Descriptive analysis

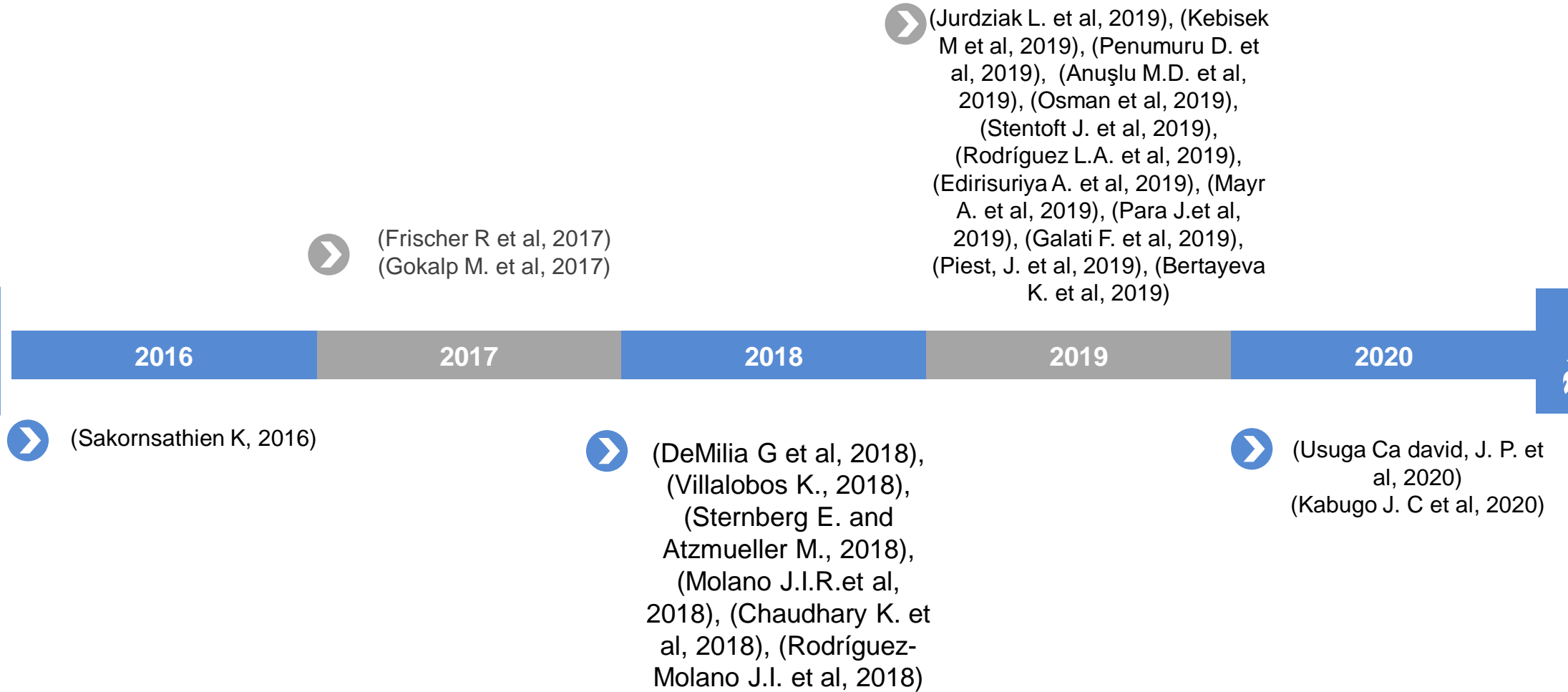
## Analyze of the keywords frequencies

Keywords	Frequency	Keywords	frequency
Industry 4.0	19	Manufacturing	3
Enterprise	3	Supply chain	2
Manufacture	9	Industrial	4
Business	1	Data	14
Management	2	Machine learning	7
IoT or internet of things	4	Artificial intelligence	1
Data mining	5	Analytics + analysis	5

Keyword frequencies



# Content analysis



# Discussion and challenges

after analyzing the selected documents, a remarkable attentiveness head towards using datamining technics aiming at implement, develop and improve I4.0 in the industrial field generally or even know barriers and the constraints in front of this objective, and it is increasing from year to another

due to the complexity of industry 4.0 with the variant type and volume of data even the uncertainty, it is well known that simple use of DM algorithms will do not produce good results,

it is difficult to generalize the integrated data mining in all the technologies of the industry 4.0; it has to be very complicate and efficient algorithms and methods in order to catch the desired results using a high quality and strong potency machines that would be expansive

Even though the industry 4.0 faces different challenges and difficulties involving many aspects, including scientific, technological, and economic challenges, in addition to social problems and political issues.

# conclusion

The group of documents that was chosen for this research, was the result of entering a query which limited the search to our domain target, however, many other articles have discussed this subject which could be analyze and treat.

The content of the analyzed documents showed the rapidly spread of using datamining in industry 4.0, improving by that the supply chain management and logistics industry.

the improvement quality of the technologies that used in logistics and industry was noticed, concluding that data mining would give logistics and industry 4.0 a leap forward.

Future research may focus on dealing with the faced challenges, also other challenges could appear by consulting other articles in this field.



Thank You for your attention





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