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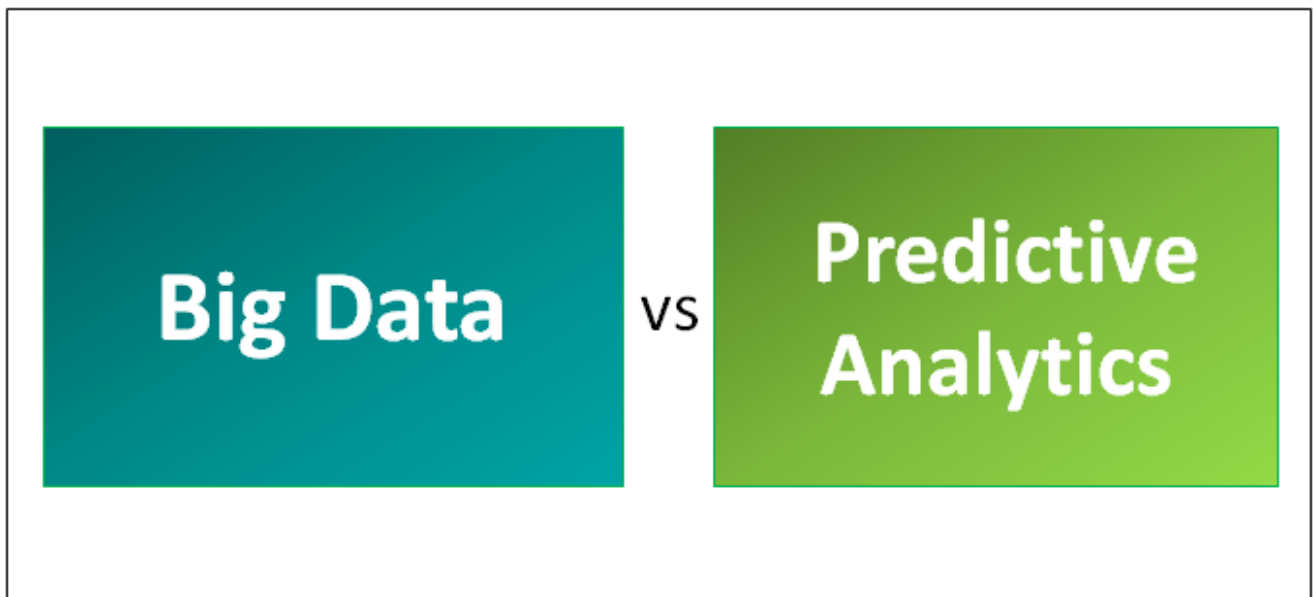
Difference Between Big Data and Predictive Analytics

As one of the most "hyped" terms in the market today, there is no consensus as to how to define Big Data and Predictive Analytics.

Big data is (https://www.educba.com/what-is-big-data/) high-volume, high-velocity and high-variety information assets that demand cost-effective, innovative forms of inform processing that enable enhanced insight, decision making (https://www.educba.com/

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(https://www.educba.
com/data-science/)

(https://www.educba.com/information-technology-benefits/) is making it economically feasible to store and analyze huge amounts of data. Big Data includes a mix of structured, semi-structured and unstructured real-time (https://www.educba.com/real-time-analytics/) data originating from a variety of sources.

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Predictive analytics encompasses (https://www.educba.com/what-is-predictive-analytics/) a variety of statistical techniques from modeling, machine learning, and data mining (https://www.educba.com/data-mining-techniques/) that analyze current and historical facts to make predictions about the future, or otherwise unknown events. Predictive Analytics provides a methodology for tapping intelligence from large data sets. Many visionary companies such as Google, Amazon etc. have realized the potential of Big Data and Analytics (https://www.educba.com/big-data-analytics-techniques/) in gaining competitive advantage. These techniques provide several opportunities like discovering patterns or better optimization algorithms. Managing and analyzing Big Data also constitutes few challenges – namely size, quality, reliability and completeness of data.

Head to Head Comparisons Between Big Data and Predictive Analytics (Infographics)
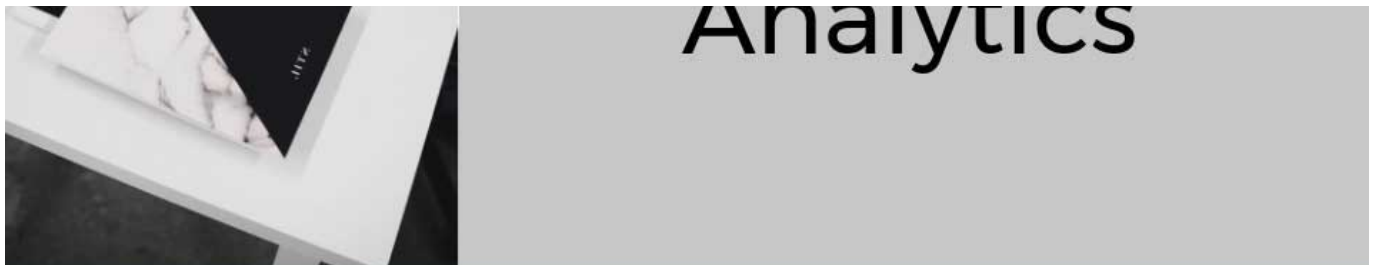
Below is the Top 6 Comparison Between Big Data and Predictive Analytics:
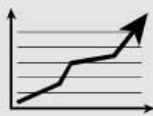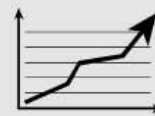

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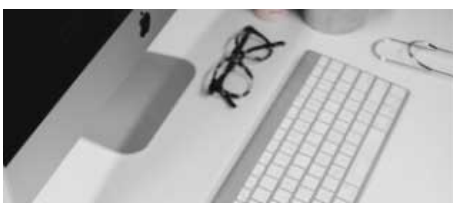
Analytics

1#. The Basics

Big Data

Big Data has to deal with cleansing and interpretation of vast amounts of information and it can be used in a broad area of business activities.

Predictive Analytics

Predictive analytics is method of forecasting business events and market behavior.

2#. Level of Advancement

Big Data

It's high. Big Data engines have eventually upgraded themselves throughout the development processes and level of cross platform compatibility.
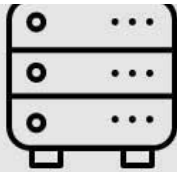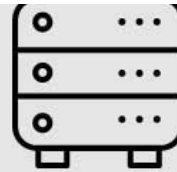
Predictive Analytics

Medium. Predictive Analytics on the other hand has limited change of algorithmic patterns as they are giving them better score from start with respect to their field domain specific work analysis.

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Big Data engines like Spark and Hadoop comes with built-in Machine Learning libraries but the incorporation with AI is still a R&D task for the Data Engineers.

Predictive Analytics on the other hand deals with the platform based on the probability and mathematical calculation. So it's kind of feasible to embed ML and AI together with these platforms.

4#. The UI and Dashboards Visualizations

Big Data

Big Data comes with vast backend technology imports for Dashboards and Visualizations like D3js and some paid one's like Spotfire a TIBCO tool for reporting.

Predictive Analytics

On the other hand Predictive Analytics tools come with built-in integrations of the reporting tools like Microsoft BI tools. So, no need to fetch it from source or from some outside vendors.

5#. Data Size and Performance

Big Data

Predictive Analytics

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6#. Popularity and Who uses them?

Big Data

Currently,
Very Hyped. Everyone in the
market wants to enter the Big
Data domain. Basically,
all the coding and the
implementations are handled by
the Big Data Engineers
and developers only. No, data
Scientist are required for such
kind of processes.

Predictive Analytics

Popular
only but not as Big Data. It
depends on the use cases and type
of organization implementing it.
For example, It's very popular with
the health care and fraud
detection organizations because of
the use case compatibility. On the
other hand Predictive analysis is
taken care by Data Scientists and
BA (Business Analyst) people and
developers.

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Key Differences Between Big Data and Predictive Analytics

Below is the list of points that describes the key difference between Big Data and Pr   Advisor

Analytics :

1. Architecture

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pipelines like AWS and data warehouses (https://www.educba.com/business-intelligence-vs-data-warehouse/) are the needs of the hour. On the other hand, Predictive analytics has to do with the application of statistical models to existing data to forecast likely outcomes with the churned data sources.

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"Big Data" describes the data itself, and the challenge of managing it, while "Predictive Analytics" describes a class of applications for the data, regardless of quantity. So, both of them represents mutually exclusive entities.

3. Social Media Use Cases

Social Media has proven to be the best use for both Big Data and Predictive Analytics. But both of them serve as a sequential chain to each other. As Social Media data comes from multiple sources but eventually gets into an MDM(Master data Management) which can be built via Big Data (https://www.educba.com/big-data-vs-data-science/) technologies only on which the Predictive Analytics and other algorithms can be fired to give the outcomes. This new type of data management solution bears the trademark of highly scalable, massively parallel, and cost-effective.

4. Technology Ecosystem in Big Data and Predictive Analytics

The sweet spot for Big Data Platforms and Predictive Analytics, for instance, is dealing with high-value transactional data that is already structured, that needs to support a large amount of user and applications that ask repeated questions of known data (where a fixed schema and optimization pays off) with enterprise-level security and performance guarantee. So to deal with them we have different tools and technologies.

For Big Data,

AWS, Apache HDFS (https://www.educba.com/hdfs-vs-hbase/), Map Reduce (https://www.educba.com/mapreduce-vs-spark/)/Spark (https://www.educba.com/apache-hadoop-vs-apache-spark/), Cassandra (https://www.educba.com/hbase-vs-cassandra/)/HBase   ⌘ Advisor

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R, Statistical methods, forecasting, regression analysis, Data Mining
(https://www.educba.com/data-mining-techniques/), Data Warehouses
(https://www.educba.com/business-intelligence-vs-data-warehouse/).

Big Data and Predictive Analytics Comparison Table

Following is the comparison table between Big Data and Predictive Analytics.

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Basis of Comparison	Big Data	Predictive An...
The Basics	Big Data has to deal with cleansing	Predictive analytics is a

Level of Advancement	It's high. Big Data engines have eventually upgraded themselves throughout the development processes and level of cross-platform compatibility.	Medium. Predictive Analytics, on the other hand, has a limited change of algorithmic patterns as they are giving them better score from the start with respect to their field and domain-specific work analysis.
Incorporates ML(Machine Learning) and AI(Artificial	Big Data engines like Spark and Hadoop comes with built-in Machine Learning libraries	Predictive Analy... the other hand, deals with the platform based

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	task for the Data Engineers.	embed ML and AI together with these platforms.
The UI and Dashboards Visualizations	Big Data comes with vast backend technology imports for Dashboards and Visualizations like D3js and some paid ones like Spotfire a TIBCO tool for reporting.	On the other hand, Predictive Analytics tools come with built-in integrations of the reporting tools like Microsoft BI tools. So, no need to fetch it from source or from some outside vendors.
Data Size and Performance	Enormous. It's not a best practice to use Big Data platforms for lesser data amounts as a performance of Big data platforms are exponential in nature.	Medium. Very large and Very less data sets can contribute to bad predictions and discoveries with respect to models and algorithms.
Popularity and Who uses them?	Currently, very hyped. Everyone in the market wants to enter the Big Data domain. Basically, all the	Popular only but Big Data. It depends on the use cases and type

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	data Scientist are required for such kind of processes.	popular with the health care and fraud detection organizations because of the use case compatibility. On the other hand, Predictive analysis is taken care by Data Scientists and BA (Business Analyst) people and developers

Conclusion

Big data vs Predictive Analysis, both are here and they are here to stay. Despite the hype, Big Data vs Predictive Analytics does offer tangible business benefit to organizations. It enables enhanced insight, decision making, and process automation. There is also a so-called paradigm shift in terms of analytic focus. That is a shift from descriptive analytics to predictive analytics (https://www.educba.com/predictive-analytics-vs-data-science/). The combination of Big Data and Predictive Analytics in all domains has the great potential to positively affect decision support and operations such as cost management systems and resource allocation.

Recommended Articles

This has been a guide to Big Data vs Predictive Analytics. Here we have discussed B   ✎ Advisor
Predictive Analytics head to head comparison, key difference along with infographics and comparison table. You may also look at the following articles to learn more –

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(https://www.educba.
com/data-science/)

(https://www.educba.com/business-intelligence-vs-business-analytics/)

3. Big Data vs Data Science – How Are They Different? (https://www.educba.com/big-data-vs-data-science/)

4. Predictive Analytics vs Data Science – Learn The 8 Useful Comparison (https://www.educba.com/predictive-analytics-vs-data-science/)

5. 5 Best Difference Between Big Data Vs Machine Learning (https://www.educba.com/big-data-vs-machine-learning/)

6. 7 Most Useful Comparison Between Business Analytics Vs Predictive Analytics (https://www.educba.com/business-analytics-vs-predictive-analytics/)

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