



BigData Analytics



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Computer
SCIENCE

Introduction

Intro



Big Data Analytics is the use of advanced analytic techniques against very large, diverse big data sets that include structured, semi-structured, and unstructured data from different sources and sizes.



Definition



- ▶ Big data is *high-volume, high-velocity* and *high-variety* information assets that demand *cost-effective, innovative* forms of information processing for *enhanced insight and decision making*. – Gartner
- ▶ 2001/02: “E-commerce, in particular, has exploded data management challenges along three dimensions: *volumes, velocity and variety*”. –Doug Laney
- ▶ Not just about catering for the size, but also the processes involved in leveraging the data



'BIG' in big data



With big data being quite a buzzword recently, many businesses wonder if their data volume is large enough to be considered 'big.' Often, the focus is on the numbers, like 100TB or 1PB. However, this approach is **misleading**.



Your data is BIG when you see that **traditional technologies and out-of-the-box solutions can't handle it anymore**. If **conventional techs can't enable the smooth operation** of your data-rich apps or **provide analytics results on time**, your data is already **voluminous** enough to **warrant big data** implementation.

[Ref: Alex Bekker, <https://www.scnsoft.com/analytics/big-data/end-to-end-applications>]

Big Data Characteristics





THE 10 V's OF BIG DATA



Use Cases



Why Big Data Now?

Confluence of 4 forces – Mobile, Social, Cloud and Information



Gartner's Nexus of Forces