Big Data Analytics in the Management of Business
PEOPLE WHO SEE THINGS BEFORE THEY HAPPEN AND THEN MAKE THEM HAPPEN.
What is Business Analytics?
Describing....

- Statistics
- Computer Science
- Data Warehousing
- SAS Software
- Six Sigma
- Dashboard
- AI
- Mathematical Models
- Dashboards

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“The extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decisions and actions”.

Re-quoted from Competing on Analytics
What is Business Analytics?

Analytics is the use of:

- data,
- information technology,
- statistical analysis,
- quantitative methods, and
- mathematical or computer-based models
to help managers gain improved insight about
their business operations and
make better, fact-based decisions.
What is Business Analytics?

Importance of Business Analytics

- There is a strong relationship of BA with:
  - profitability of businesses
  - revenue of businesses
  - shareholder return
- BA enhances understanding of data
- BA is vital for businesses to remain competitive
- BA enables creation of informative reports
Evolution of Business Analytics

- Operations research
- Management science
- Business intelligence
- Decision support systems
- Personal computer software
++ Others
What is Data Mining?

Data mining discovers meaningful patterns in your complex data.
Clustering techniques
Clustering techniques
Clustering techniques
Association algorithms
Association algorithms
Sequence association

1. Home Page
2. e-store
3. Check-out Page
Prediction & Classification
Prediction & Classification

Education

no college

college grad
Prediction & Classification

Income

low income  high income
Prediction & Classification

RESPOND

"Education"

college grad

"Income"

no college

low income

high income
Analytics Software.....

- SAS – BASE, Predictive Analytics, Visual Analytics, Enterprise Miner, Text Analytics......
- Clementine
- Polyanalyst
- Answer Tree
- SPSS
- NNIVO
- Tableau
- Weka
- Programming – R
- Many many.......
Certifications

- SAS
- The Data Warehousing Institute (TDWI)
- Teradata
- Jigsaw Academy
- ADSA
- Analytics Training Institute.
- CPRE certification from International Requirements Engineering Board (IREB®), Germany
- CCBA®/CBAP® certifications from International Institute of Business Analysis (IIBA®), Canada
- PMI-PBA® certification from Project Management Institute, USA
- Google Analytics
- Ernst & Young certification
- MOOCs
- IBM
Resources

- Analytics India: Magazine, Job Portal
- Analytics Vidya
- TUN: Teradata University Network
- SAS
- IBM
- TDWI
- MOOCs
<table>
<thead>
<tr>
<th>SN</th>
<th>Type of Eco-System</th>
<th>Activity in Analytics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Data Generation Infrastructure Providers</td>
<td>Enable generating and collection of data that may be used for developing analytical insights</td>
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<td>2</td>
<td>Data Management Infrastructure Providers</td>
<td>Provide hardware and software targeting the basic foundation for all data management solutions.</td>
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<td>3</td>
<td>Data Warehouse Providers</td>
<td>Provides technology and services aimed towards integrating data from multiple sources, thus enabling organizations to derive and deliver value from its data assets.</td>
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<td>4</td>
<td>Middleware Providers</td>
<td>To provide easy to use tools for reporting or descriptive analytics which forms a core part of BI or analytics employed at organizations.</td>
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<td>5</td>
<td>Data Service Providers</td>
<td>External data sources – data collected by third parties. Typically focus on a specific industry sector and build upon their existing relationships in that industry through their niche platforms and services for data collection.</td>
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<td>6</td>
<td>Analytics Focused Software Developers</td>
<td>Developed analytics software for general use with data that has been collected in a data warehouse or is available</td>
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<td>7</td>
<td>Application Developers: Industry Specific or General</td>
<td>Use their industry knowledge, analytical expertise, solutions available from the data infrastructure, data warehouse, middleware, data aggregators, and analytics software providers to develop custom solutions for a specific industry.</td>
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<td>8</td>
<td>Analytics Industry Analysts and Influencers</td>
<td>Organizations or professionals that provide advice to the analytics industry providers and users.</td>
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<td>9</td>
<td>Academic Institutions and Certification Agencies</td>
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<tr>
<td>10</td>
<td>Regulators and Policy Makers</td>
<td>Defining rules and regulations for protecting employees, customers and shareholders of the analytics organizations.</td>
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<tr>
<td>11</td>
<td>Analytics User Organizations</td>
<td>User organizations</td>
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