



SNS College of Technology

Coimbatore - 35



19BAZ782 – Analytics for Everyone

Unit IV – Predictive Analytics I

Topic...Guess...???

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1st Indian Institution to Implement Design Thinking Curriculum
Redesigning Common Mind and Business Towards Excellence



Recall



- Business Analytics
- Introduction and its components
- Case studies



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Guess the topic...???





Descriptive Analytics



Problems

- Which product is the customer likely to buy?
- Which customer is likely to default?
- Who is likely to cancel the product ordered through e-commerce?

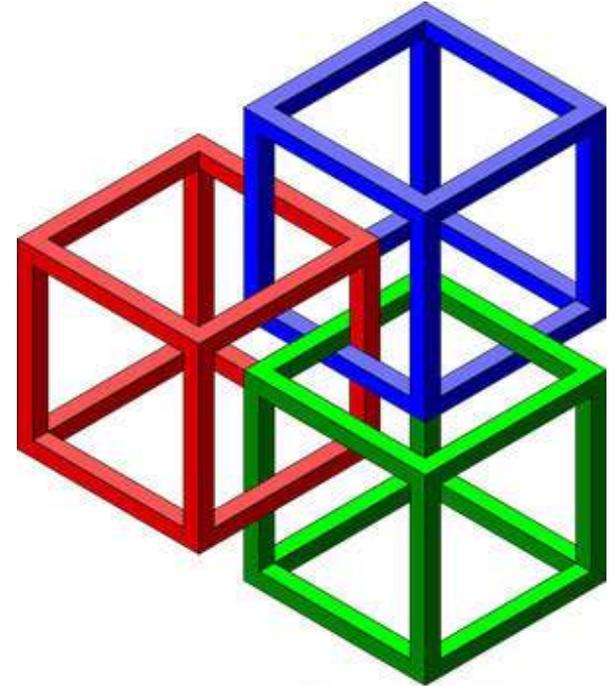




Framework - Predictive Analytics



1. Problem / opportunity identification
2. Collection of relevant data
3. Data preparation / data pre-processing
4. Model development
5. Communication of the result and deployment





2. Data driven mechanism

- Data quality can be bad
- Many features are missing
- Data may be incorrect
- Important variables are not captured





1. Problem Identification

- Big Basket – *Did you forget...?*
- Analytics should have measurable impact





3. Data preparation

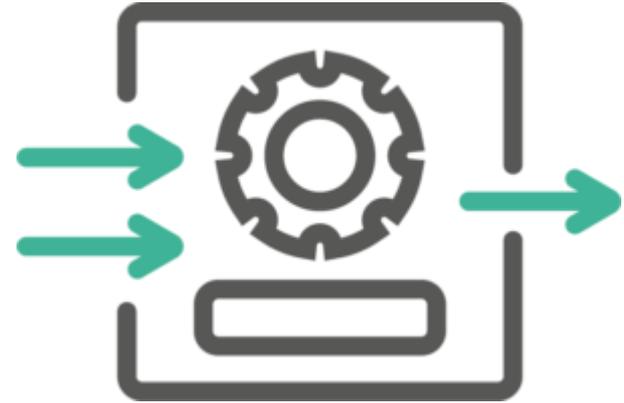
- Missing data – Data imputation
- Regression and K nearest neighbors
- But less than 10% only
- Feature engineering: Interaction variables and Ratios
- Divide the data : Training and Validation





4. Model Deployment

- Robots deployed in hotels, agri, etc





Models

- **Decision trees** use branching to show possibilities stemming from each outcome or choice.
- **Regression techniques** assist with understanding relationships between variables.
- **Neural networks** utilize algorithms to figure out possible relationships within data sets.





Assessment



If your business only has a \$5,000 budget for an upsell marketing campaign and you have three million customers, you obviously can't extend a 10 percent discount to each customer...

Which type of analytics should be used...and why?





Summary



- Descriptive analytics
- Framework of predictive analytics
- Predictive Models

SUMMARY





Reference

- <https://www.valamis.com/hub/predictive-analytics>
- <https://learn.g2.com/predictive-analytics-examples>
- <https://www.mathworks.com/discovery/predictive-analytics.html>
- <https://www.predictiveanalyticstoday.com/what-is-predictive-analytics/>
- <https://www.cio.com/article/3273114/what-is-predictive-analytics-transforming-data-into-future-insights.html>



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*Thank
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