Summary of Data Mining and Analytics I

# Overview of Data Mining

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| Types of Data Mining | | |
| Basis for Comparison | **Descriptive Mining** | **Predictive Mining** |
| Basic | It identifies what happened in the **past** by analyzing stored data. | It describes what can happen in the **future** based on historic data. |
| Requirements | Data aggregation and data mining | Statistics and forecasting methods |
| Preciseness | Provides accurate data | Produce results that does not ensure accuracy. |
| Approach | Reactive | Proactive |
| Practical Analysis Methods | Standard reporting, query/drill down and ad-hoc reporting. | Predictive modelling, forecasting, simulation and alerts. |
| Examples | *Adverse events of a drug were explored by clustering the therapeutic classes; A data analyst receives detailed customer purchasing data and finds associations of any type among customers.* | *An automobile company scored customers for likelihood to return to buy a new model within the next 6 months; A credit card company offered a valued customer product for their card holder based on past card usage to determine the risk pattern; Road traffic was forecasted hourly* |

## Data mining aims

Customer Loyalty

Customer Satisfaction

One-to-One Marketing – Knowing each customer