

# Data Mining Applications

- determine the best product quality test plan for a manufacturing firm.
- critical product components for which assurance of performance was required prior to assembly - stringent acceptance tests were usually conducted to confirm conformance to specifications. These acceptance tests were tedious and costly, and could slow the entire production process.
- This would enable the manufacturing firm to reduce testing time tremendously, and thus increase production output without diminishing output quality.

- predictive model to select an optimal set of potential customers to send marketing materials.
- This is a classical customer segmentation application of data mining.

- analysis of Persian Gulf War illnesses
- The data mining study was based on the premise that is a syndrome existed; it would appear through higher proportions of occurrence in groups with similar attribute characteristics.

- helping Hollywood managers make better decisions on important movie characteristics (e.g., genre, super stars, technical effects, release time, etc.) in order to optimize the financial return on their investments.

- Warranty costs are important factors in the convergence of products and services. There is more focus on the value provided to customers as opposed to simply making products with which to stock shelves. Monitoring warranty claims is important for a variety of reasons. Warranty claims are indications of product quality problems, and can lead to improved product development processes or better product designs.

- Living standards have been steadily rising in Taiwan, and indoor recreational activities are now receiving much attention. As a consequence, the market for video rentals has been flourishing in recent years. Renting videotapes, VCDs, and DVDs, to watch at home has become a common consumer entertainment activity. With the arrival of the US video store chain Blockbuster in Taiwan, stagnant personal incomes, and inflation, competition among video rental stores has grown, and their management is becoming more difficult. Like many retail businesses, video rental stores must be guided by the pattern of customer demand. Therefore, the purpose of this study is to investigate how to help rental stores using information in their databases to understand each customer's preferences and demand, so as to increase the rental ratio.

