CRM Concepts and Data Mining Models

- **Introduction**
  - **Overview:**
    - BioFood mission is delivering organic food
  - **CRM Challenges:**
    - Delayed Order Processing
    - Stock Management Issues
    - Delivery Routes
  - **Purpose of Presentation:**
    - Explore the CRM challenges through data mining models

Main Tasks of CRM

Customer Acquisition

Customer Retention

Customer Service Management

Methods Derived from Tasks

Segmentation and Targeting for Customer Acquisition

Personalized Communication for Customer Retention

Customer Feedback and Resolution Systems for Service Management

Data Mining Models Overview

- Classification Models (predicting cusromer behaviour and churn)
- Clustering Algorithms (customer segmentation)
- Association Rule Mining (uncovering purchasing patterns)
- Regression Analysis (sales forcasting and customer value prediction)

Models to Methods Mapping

Classification	Used to segment customers and predict churn (applying to retention strategies)
Clustering	Identifies customer groups for targeted marketing (enhancing acquisition efforts)
Association Rules	Discovers product attraction for personalized promotions (aiding in customer service)
Regression	Estimates trends to forecast sales (relevant to managing customer relationships over time)

Implementing Data Mining Solutions

Data Preparation	Ensuring CRM data is clean and structured for analysis
Model Selection	Choosing the right models based on CRM Objectives
Integration	Seamlessly combines models into the CRM system
Monitoring and Updating	Continuously estimate model performance and making necessary adjustments
Training	Educating CRM team members on utilizing insights from data mining

Case Studies

Case

Case Study 1

- Retail company utilized clustering to segment their customers (resulting 25% increase in targeted marketing campaign)

Case

Case Study 2

- E-commerce platform applied classification modelsto predict customer churn (reducing it by 15% within a year)

Case

Case Study 3

- Service provider used regression analysis to forecast customer lifetime value (enables offers that boosted customer retention rates by 20%)

Challenges and Considerations

Data Privacy and Security	Managing sensitive customer data responsibly
Integration with Existing System	Ensuring compatibility and seamless operation
Data Quality and Completeness	Necessity of high-quality, comprehensive data for accurate modeling
Skill Gap	Need for staff with data analysis and data mining expertise
Continous Evolution	Keeping up with advancements in data mining technologies

Next Steps and Future Directions

Pilot Project

Training Programs

Data Governance Review

Feedback Mechanism

Exploration of Advanced Analytics

Conclusion

- CRM and Data Mining
  - Addressing BioFood‘s CRM challenges through targeted data mining models enhances customer satisfaction
- Model Selection
  - Chosen Models (classification, clustering, etc.) are addressed to improve customer acquisition, retention, and service
- Implementation Steps
  - Emphasize the role of pilot projects and training in successful data mining integration
- Looking Forward
  - Anticipate continous CRM enhancement through data mining advancements, driving future business growth