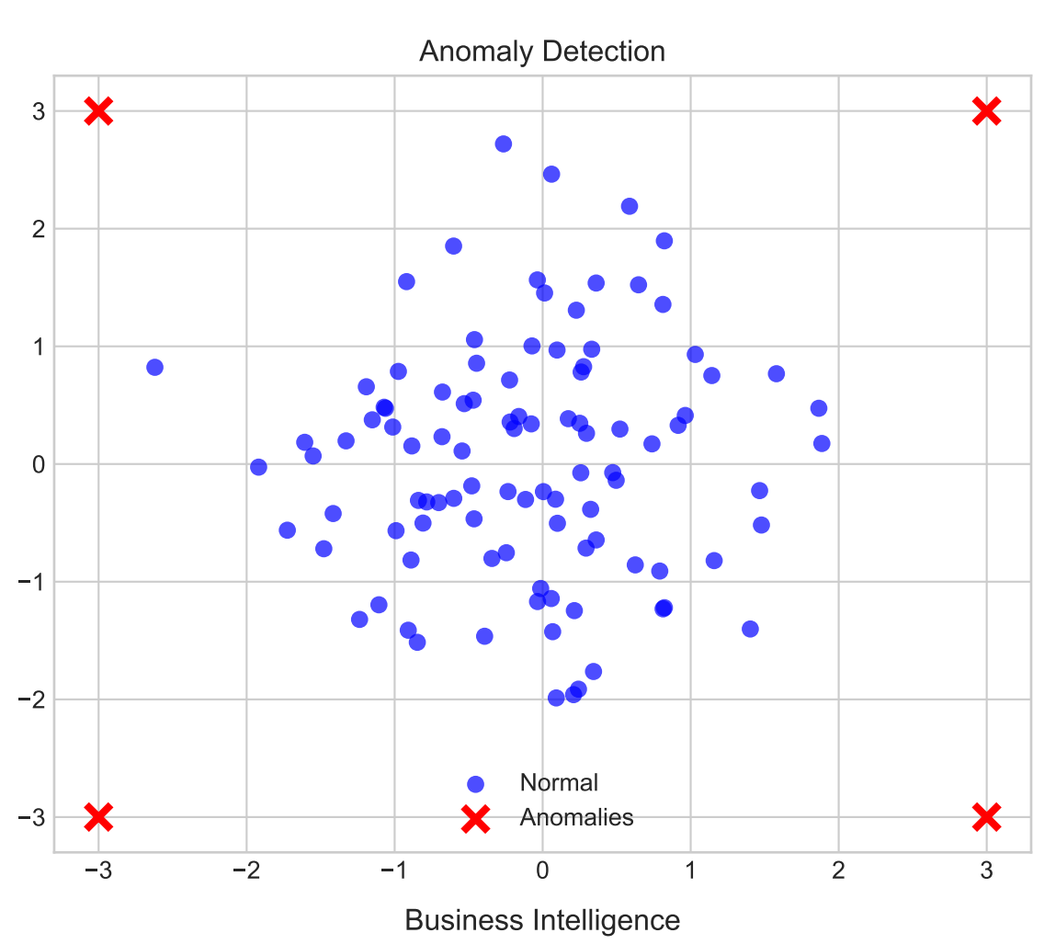

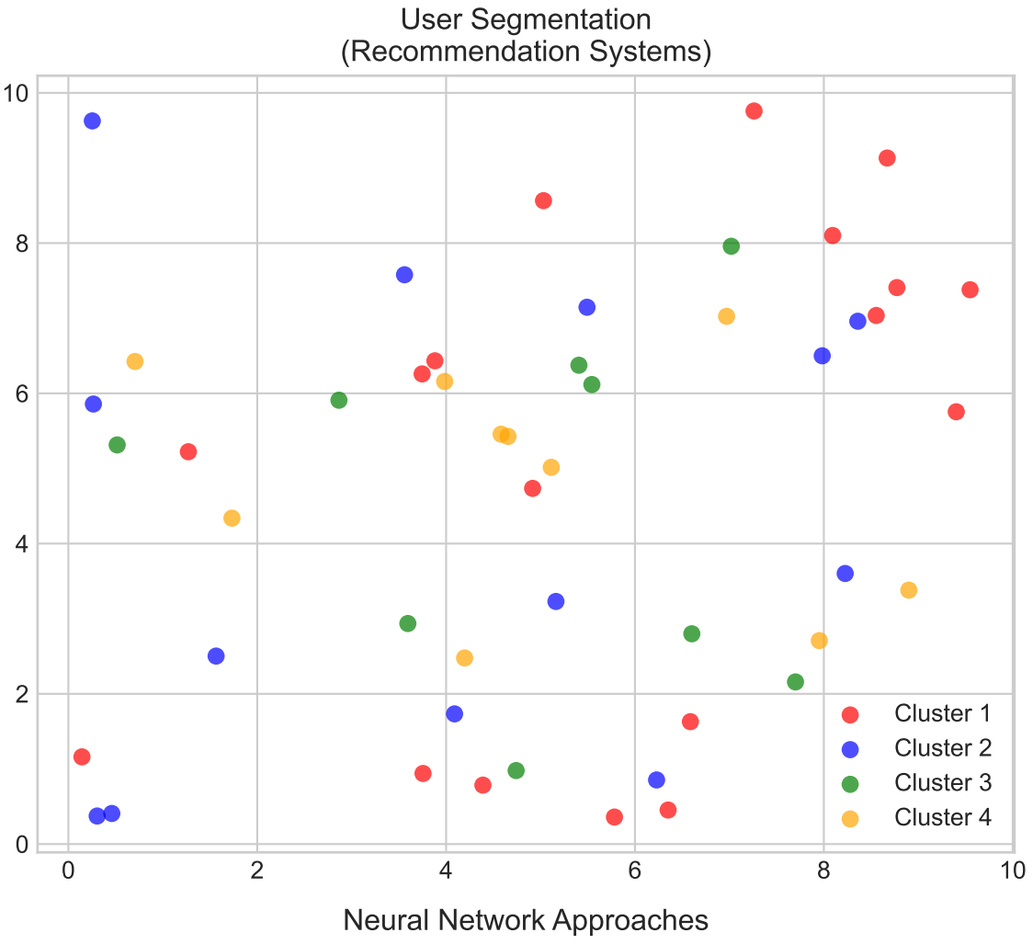

Business Intelligence Applications:

- Customer Segmentation
  - Demographic groups
  - Behavioral patterns
  - Value-based segments
- Market Research
  - Product categories
  - Competitor analysis
  - Trend identification
- Operational Optimization
  - Resource allocation
  - Process improvement
  - Cost reduction

Neural Network Clustering:

- Autoencoders
  - Learn data representations
  - Dimensionality reduction
  - Feature extraction
- Self-Organizing Maps
  - Topological preservation
  - Visualization
  - Pattern recognition
- Deep Embedded Clustering
  - End-to-end learning
  - Joint optimization
  - State-of-the-art results