

Recognition

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Recognition

- A labelling process
- Assumes that objects have been segmented
- Viewing geometry is known (perpendicular to the workspace)
- Variability in orientation
 - rotation invariant descriptors
 - identifying principal axes

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Patterns

- A pattern is an arrangement of descriptors
- A pattern class is a family of descriptors that share some common properties
- Pattern recognition assigns patterns to their classes automatically

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Pattern arrangements

- Vectors
- Strings
- Trees

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Two approaches

- ❶ Decision theoretic
 - Uses quantitative descriptions like statistical texture
- ❷ Structural
 - Uses symbolic descriptions and relationships like sequences in a chain coded boundary

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❶ Decision Theoretic Methods

- Based on decision (discriminant) functions
- Let $x = (x_1, x_2, \dots, x_n)^T$ represent a column pattern vector with real components, where x

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② Structural Methods

- 1. Matching Shape Numbers
- 2. String Matching
- 3. Syntactic Recognition of Strings
- 4. Syntactic Recognition of Trees

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Interpretation

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