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**Rashmi (1DS09IS067)**

**Shravya.M (1DS09IS077)**

**Sindhu.N (1DS09IS080)**

**Supritha.Shet (1DS09IS084)**

# ABSTRACT

The suggested algorithm for shape classification described in this report is based on several steps. The algorithm analyzes the contour of pairs of shapes. Their contours are recovered and represented by a pair of N points. Given two points pi and qj from the two shapes the cost of their matching is evaluated by using the shape context and by using dynamic programming the best matching between the point sets is obtained. Dynamic programming not only recovers the best matching, but also identifies occlusions, i.e. points in the two shapes which cannot be properly matched. From dynamic programming we obtain the minimum cost for matching pairs of shapes. After computing pair wise minimum cost between input and all reference shapes in the given database, we sort based on the minimum cost in ascending order and select first two shapes to check if it belongs to the input class. If it belongs to the input class, then we say that the shape is classified as a perfect match, else it is a mismatch. The algorithm has been tested on a set of shape databases Kimia-25, Kimia-99, Kimia-216 and MPEG-7 providing good performances for shape classification.

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