APPENDIX - A
Samples of Different Numeral Characters
Projection of Vertical, Horizontal and Slant projection of Original Image of Standard Numeral Character Zero.
Projection of Vertical, Horizontal and Slant Projection of Skeleton Image of Standard Numeral Character Zero.
MATCHING OF PATTERNS

\[
\begin{align*}
\text{Membership value Vertical direction} & = 0.7391 \\
\text{Matching percentage} & = 73.91 \\
\text{Membership value Horizontal direction} & = 0.5399 \\
\text{Matching percentage} & = 83.09 \\
\text{Membership value Slant direction} & = 0.6220 \\
\text{Matching percentage} & = 83.10
\end{align*}
\]

Matching Pattern with Membership Value and Percentage of matching.
Output of Matching

Membership value = 0.6210

Matching percentage = 84.59

Output Pattern Matching with Membership Value and Percentage of matching.
Projection of Vertical, Horizontal and Slant Projection of Original Image of Italic Numeral Character Zero.
Projection of Vertical, Horizontal and Slant Projection of Skeleton Image of Italic Numeral Character Zero.
Projection of Vertical, Horizontal and Slant Projection of Original Image of Numeral Character One.
Projection of Vertical, Horizontal and Slant Projection of Skeleton Image of Numeral Character One.
MATCHING OF PATTERNS

![Graph showing membership values across different percentage ranges.

Membership value Vertical direction  =  0.9710
Matching percentage  =  69.56
Membership value Horizontal direction  =  0.6737
Matching percentage  =  85.10
Membership value Slant direction  =  0.7227
Matching percentage  =  70.12

Matching Pattern with Membership Value and Percentage of matching.
Output of Matching

Membership value = 0.8210

Matching percentage = 87.33

Output Pattern Matching with Membership Value and Percentage of matching.
Projection of Vertical, Horizontal and Slant Projection of
Original Image of Numeral Character Five.
Projection of Vertical, Horizontal and Slant Projection of Skeleton Image of Numeral Character Five.
MATCHING OF PATTERNS

![Graph showing membership values and percentages.]

Membership value Vertical direction = 1.000
Matching percentage = 70.00
Membership value Horizontal direction = 1.000
Matching percentage = 90.54
Membership value Slant direction = 0.1000
Matching percentage = 86.10

Matching Pattern with Membership Value and Percentage of matching.

140
Output of Matching

\[ \text{Membership value} = 1.000 \]

\[ \text{Matching percentage} = 70.00 \]

Output Pattern Matching with Membership Value and Percentage of matching.
Projection of Vertical, Horizontal and Slant Projection of Original Image of Numeral Character Seven.
Output of Matching

Membership value = 0.8245

Matching percentage = 87.37

Output Pattern Matching with Membership Value and Percentage of matching.
Projection of Vertical, Horizontal and Slant Projection of Original Image of Numeral Character Eight.
Projection of Vertical, Horizontal and Slant Projection of
Skeleton Image of Numeral Character Eight.
MATCHING OF PATTERNS

Membership value Vertical direction = 0.4712
Matching percentage = 62.068
Membership value Horizontal direction = 0.5903
Matching percentage = 62.06
Membership value Slant direction = 0.4650
Matching percentage = 60.12

Matching Pattern with Membership Value and Percentage of matching.
Output of Matching

Membership value $= 0.5310$

Matching percentage $= 62.96$

Output Pattern Matching with Membership Value and Percentage of matching.
Projection of Vertical, Horizontal and Slant Projection of Original Image of Numeral Character Nine.
Projection of Vertical, Horizontal and Slant Projection of
Skeleton Image of Numeral Character Nine.
MATCHING OF PATTERNS

Membership value Vertical direction = 0.5555
Matching percentage = 83.33
Membership value Horizontal direction = 1.000
Matching percentage = 93.40
Membership value Slant direction = 0.6450
Matching percentage = 88.12

Matching Pattern with Membership Value and
Percentage of matching.
Output of Matching

Membership value = 0.7778
Matching percentage = 86.66

Output Pattern Matching with Membership Value and Percentage of matching.
APPENDIX - B
Publications based on the work

Reported in this Thesis
Publications based on the work reported in this Thesis

International Conferences


Journals


[4] P. Chaudhari, N. S. Chaudhari, "Handwritten Numeral Character Recognition using Sector based approach", has been accepted for publication in IJCMSA.

[5] P. Chaudhari, N. S. Chaudhari, "Devnagari Handwritten Numeral Character Recognition", has been accepted for publication in IJCMSA.

National Conferences


