| Array A |
| :---: |
| 00000000 |
| 01110000 |
| 10001000 |
| 10000100 |
| 11000100 |
| 00100100 |
| 00011000 |

Array B

$$
\begin{array}{lllllllll}
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 1 & 1 & 1 & 0 & 0 \\
0 & 0 & 1 & 0 & 0 & 0 & 1 & 0 \\
0 & 0 & 1 & 0 & 0 & 0 & 0 & 1 \\
0 & 0 & 1 & 1 & 0 & 0 & 0 & 1 \\
0 & 0 & 0 & 0 & 1 & 0 & 0 & 1 \\
0 & 0 & 0 & 0 & 0 & 1 & 1 & 0
\end{array}
$$

The object outline showed in Array A is in a different position in Array B. Here I have just translated it, but in the full problem you are solving, it can be translated, rotated, scaled, skewed, etc. or worse.

You are to define a distance from Array A to Array B that shows how close they are to being the same. The distance should use all the one pixels of Array A, which is the actual image. Array $B$ is what the search is producing so far. It is not correct till it lines up perfectly with Array A.

