

Mutate Function:

This function takes as input a number of desired mutations and a 6x5 input pattern and mutates that many pixels from the input pattern.

```
function output = mutate(num_mutations, pattern)
    % generate a random x and y index
    x_rand = randi(5, [1 num_mutations]);
    y_rand = randi(6, [1 num_mutations]);
    output = pattern;
    % mutate the pixels at these indices
    for i=1:num_mutations
        output(y_rand(i), x_rand(i)) = -1*output(y_rand(i), x_rand(i));
    end
end
```