

Ejemplo ECUALIZACIÓN

Imagen inicial:

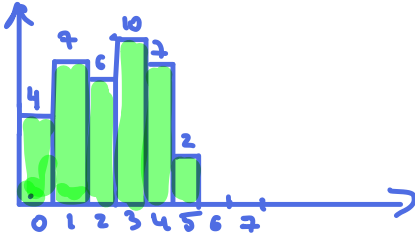
0	1	1	2	2	2
3	3	1	3	3	2
3	3	1	5	3	2
3	3	0	5	0	0
3	4	1	4	2	4
4	4	1	4	1	4

Imagen resultante:

4º

1	2	2	3	3	3
5	5	2	5	5	3
9	5	2	7	5	3
5	5	4	7	1	1
5	7	2	7	3	9
7	7	2	7	2	7

1º Histograma inicial



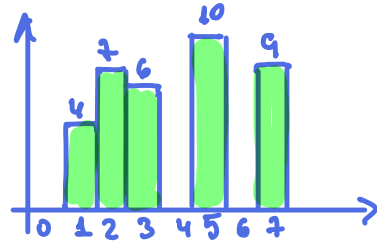
3º LUT

0	1
1	2
2	3
3	5
4	7
5	7
6	7
7	7

2º

NIVEL GRIS	0	1	2	3	4	5	6	7
NUM	4	7	6	10	7	2	0	0
PROB	$\frac{4}{36}$	$\frac{7}{36}$	$\frac{6}{36}$	$\frac{10}{36}$	$\frac{7}{36}$	$\frac{2}{36}$	0	0
PROB ACUM	$\frac{4}{36}$	$\frac{11}{36}$	$\frac{17}{36}$	$\frac{27}{36}$	$\frac{34}{36}$	1	1	1
x Niv. máx. (x7)	$\frac{28}{36}$	$\frac{77}{36}$	$\frac{119}{36}$	$\frac{189}{36}$	$\frac{232}{36}$	7	7	7
	0'77	2'14	3'31	5'25	6'61	7	7	7
NUOVO NIVEL	1	2	3	5	7	7	7	7

4º Hist final



Ejemplo AUTOESCALADO

Imagen inicial:

0	1	1	2	2	2
3	3	1	3	3	2
3	3	1	5	3	2
3	3	0	5	0	0
3	4	1	4	2	4
4	4	1	4	1	4

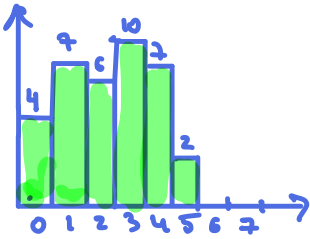
Imagen resultante:

0	1	1	3	3	3
4	4	1	4	4	3
4	4	1	7	4	3
4	4	0	3	0	0
4	6	1	6	3	6
6	6	1	6	1	6

Realizar un autoescalado entre los niveles de gris 0 y 7

$$g(x,y) = \frac{f(x,y) - f(x,y)_{\min}}{f(x,y)_{\max} - f(x,y)_{\min}} [MAX - MIN] + MIN$$

1º Histograma Inicial



2º

$$f(x,y)_{\min} = 0 \quad MIN = 0$$

$$f(x,y)_{\max} = 5 \quad MAX = 7$$

NIVEL

NUOVO NIVEL

$$0 \quad g_0(x,y) = \frac{0-0}{5-0} [7-0] + 0 = 0$$

$$1 \quad g_1(x,y) = \frac{1-0}{5-0} [7-0] + 0 = 7/5$$

$$2 \quad g_2(x,y) = \frac{14}{5} = 2'8 \approx 3 \quad \begin{matrix} 1'4 \\ 2'2 \\ 1 \end{matrix}$$

$$3 \quad g_3(x,y) = \frac{21}{5} = 4'2 \approx 4$$

$$4 \quad g_4(x,y) = \frac{28}{5} = 5'6 \approx 6$$

$$5 \quad g_5(x,y) = 7$$

3º L.U.T

0	0
1	1
2	3
3	4
4	6
5	7

4º Hist. final

