Image Edge Histogram

225 x 224

RGB to Grayscale

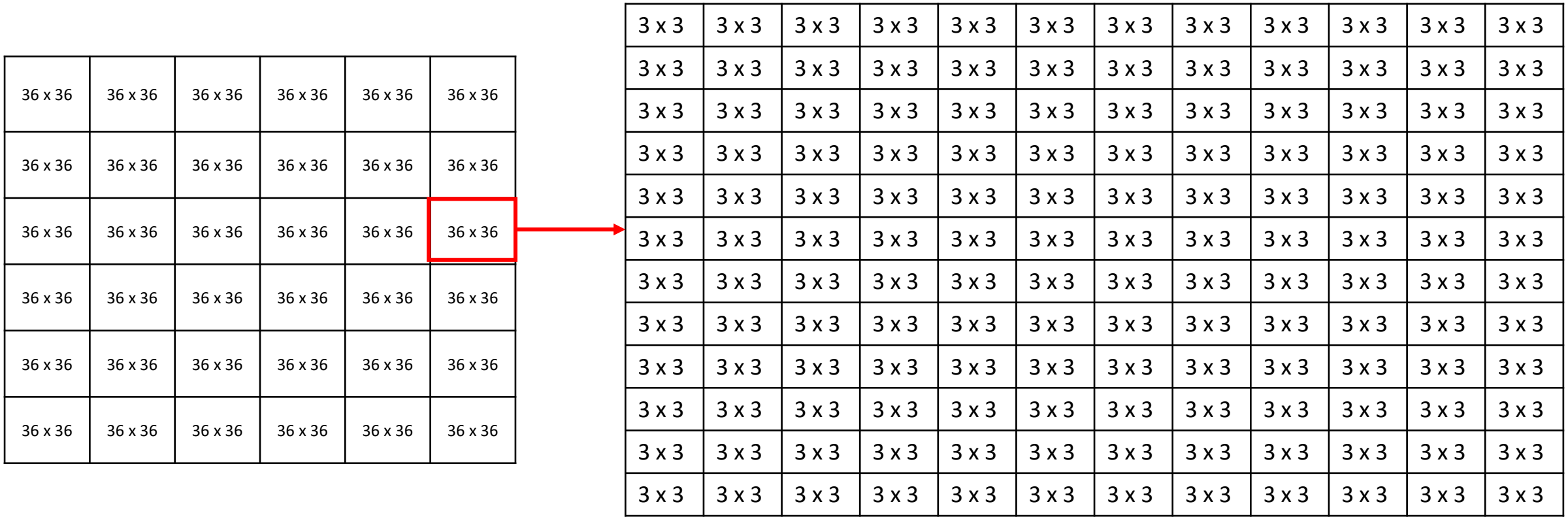
225 x 224

Resized as multiple of 6

222 x 222

0	37	74	111	148	185	222
37	B1 (36 x36)	B2 (36 x36)	B3 (36 x36)	B4 (36 x36)	B5 (36 x36)	B6 (36 x36)
74	B7 (36 x36)	B8 (36 x36)	B9 (36 x36)	B10 (36 x36)	B11 (36 x36)	B12 (36 x36)
111	B13 (36 x36)	B14 (36 x36)	B15 (36 x36)	B16 (36 x36)	B17 (36 x36)	B18 (36 x36)
148	B19 (36 x36)	B20 (36 x36)	B21 (36 x36)	B22 (36 x36)	B23 (36 x36)	B24 (36 x36)
185	B25 (36 x36)	B26 (36 x36)	B27 (36 x36)	B28 (36 x36)	B29 (36 x36)	B30 (36 x36)
222	B31 (36 x36)	B32 (36 x36)	B33 (36 x36)	B34 (36 x36)	B35 (36 x36)	B36 (36 x36)

After resizing, image is divided into blocks of size 36 x 36



- Dimensional of each block is made multiple of 3, as edge filters are of 3x3 dimensions
- A block of 36 is further divided into sub blocks of size 3 x 3. Hence for each block there are 12 x 12 =244 sub blocks (or for each block, there are 12 rows and 12 columns)

3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3

- 5 Filters of size 3x3 will be applied to each sub block and score of maximum filter will be overserved.
- If that value is greater than a pre-defined threshold then frequency of that edge will be incremented by one

PV	PV	PV	PV	PV	PV	PV	PV	PV	PV	PV	PV
PV	D135	D135	D135	d135	ISOT	ISOT	ISOT	ISOT	ISOT	ISOT	d135
D45	ISOT	Ph	PH	PH	ISOT	Ph	Ph	PH	ISOT	ISOT	d135
ISOT	D45	ISOT	PV	d135	ISOT	ISOT	ISOT	ISOT	PV	ISOT	d135
d135	ISOT	D45	d45	d135	PV	PH	Ph	Ph	PV	ISOT	d135
d135	ISOT	d135	d45	d135	PV	d45	ISOT	ISOT	PV	ISOT	d135
d135	ISOT	D135	D45	d45	PV	d45	ISOT	ISOT	ISOT	PV	d135
d135	ISOT	PV	ISOT	d135	ISOT	d45	ISOT	PV	ISOT	ISOT	d135
d135	ISOT	ISOT	ISOT	d135	d45	PH	Ph	Ph	Ph	PH	D135
ISOT	ISOT	ISOT	ISOT	D135	PV	d45	ISOT	ISOT	PV	ISOT	ISOT
Ph	Ph	Ph	Ph	Ph	Ph	D45	D45	ISOT	PV	D45	d45
ISOT	ISOT	ISOT	ISOT	ISOT	ISOT	ISOT	ISOT	d45	PV	ISOT	ISOT

- In above grid, Name of filter with highest score is mentioned
- According to the occurrence of particular edge in a sub block a list of bins is maintained. As there are 6 x 6 blocks, so we will get 36 such bins
- There will be an array of 37x 5; 36 x 5 as per number of blocks. Where as the last row will store mean value of each edge.
- In total there will be 37*5=185 total numeric values
- As overall score of image w.r.t each edge, last row will be considered

Pv	Ph	D45	D135	ISOT
27	20	17	25	67

	PV	PH	D45	D135	ISOT
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
.....					
29					
30					
31					
32					
33					
34					
35					
36					