

# **Inteligencia Artificial II**

## **Comparación de rendimiento en PDI MS Windows vs GNU/Linux**

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**Fecha:** 2021-01-11

## **Reporte de Resultados Windows**

**Universidad Politécnica Salesiana**

Ruta Imagen: sunflower/image\_0001.jpg

Tamaño Color-> 10.5 KB

Tamaño Escala GRIS 8.7 KB



### Histogramas



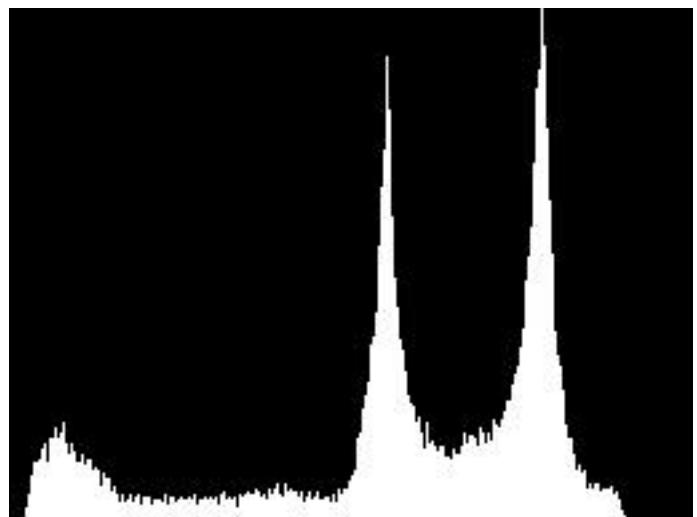
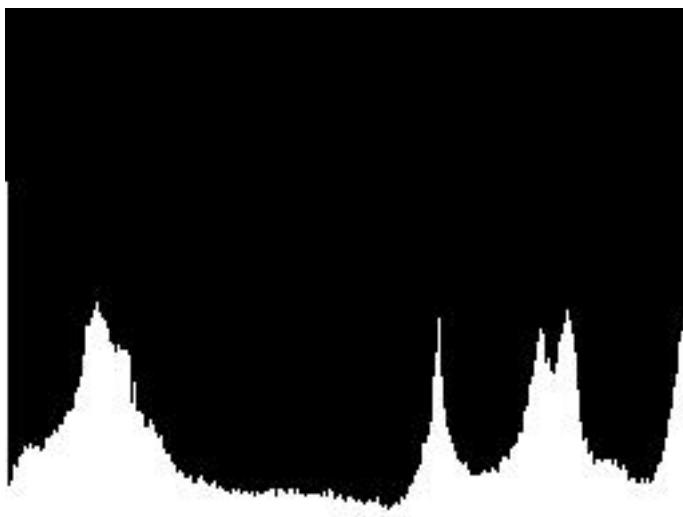
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Tamaño Color-> 13.1 KB

Tamaño Escala GRIS 10.4 KB



### Histogramas



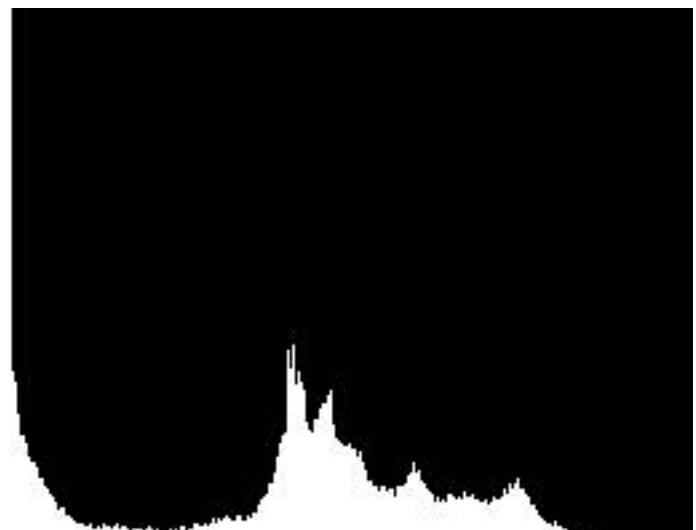
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Tamaño Color-> 13.9 KB

Tamaño Escala GRIS 10.7 KB



### Histogramas



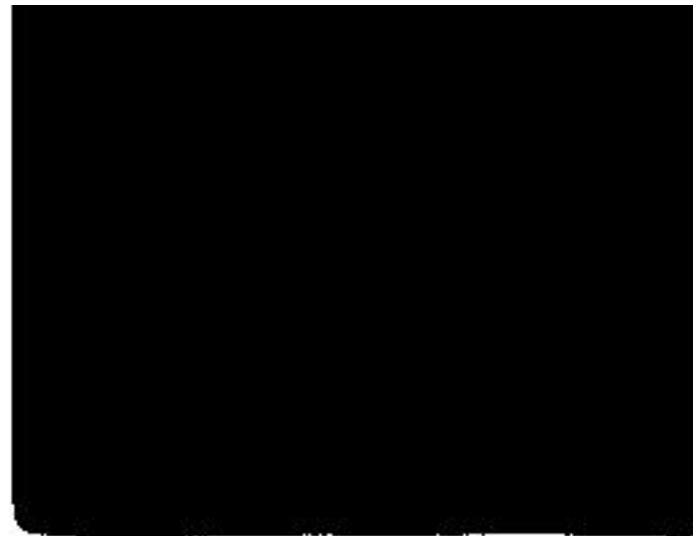
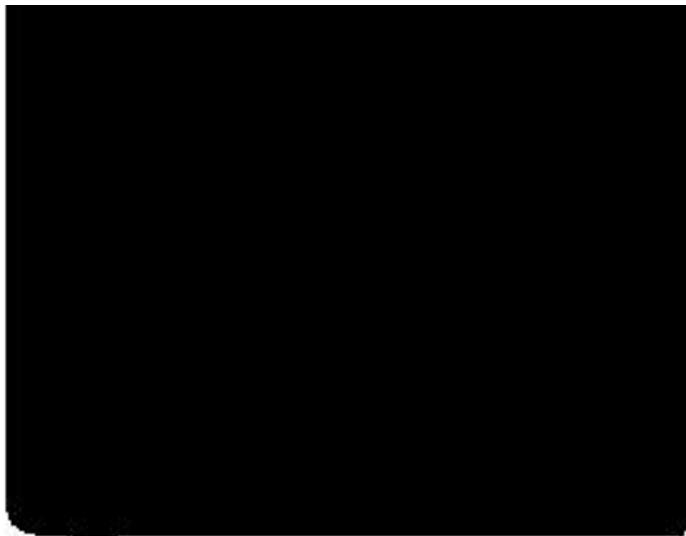
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Tamaño Color-> 11.7 KB

Tamaño Escala GRIS 10.0 KB



### Histogramas



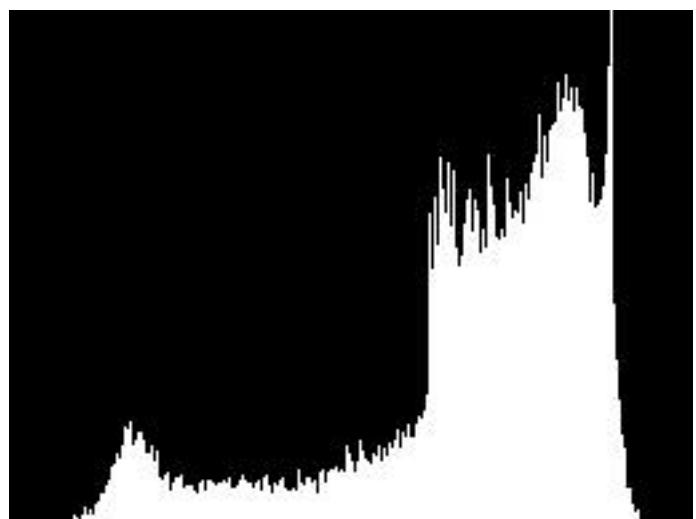
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Tamaño Color-> 15.3 KB

Tamaño Escala GRIS 12.2 KB



### Histogramas



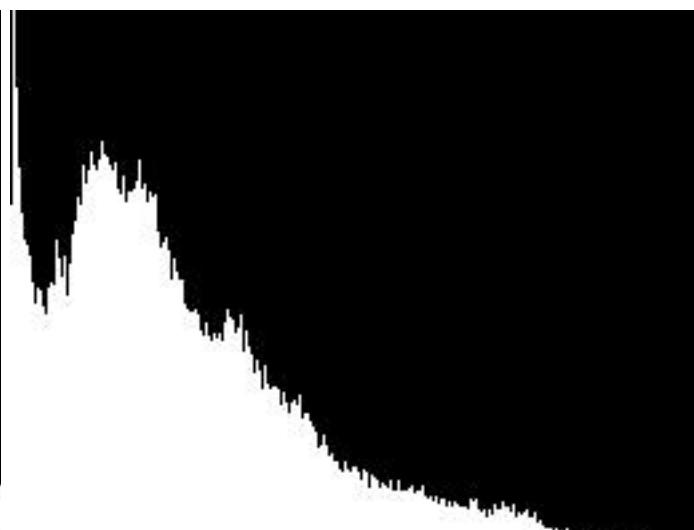
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Tamaño Color-> 12.5 KB

Tamaño Escala GRIS 9.8 KB



### Histogramas



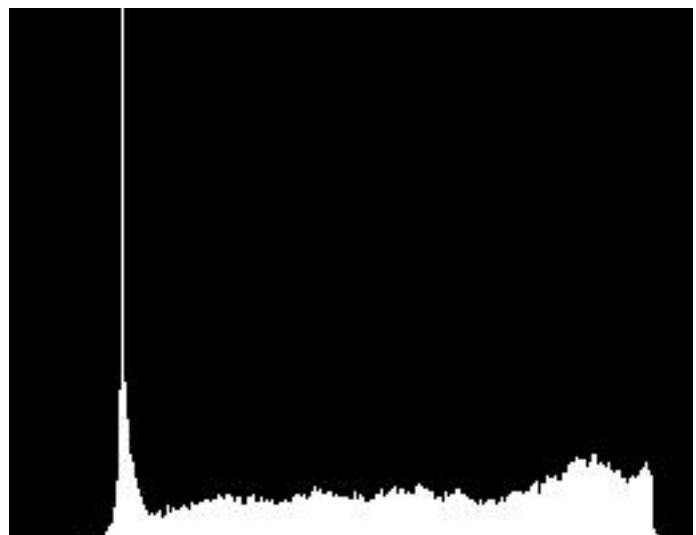
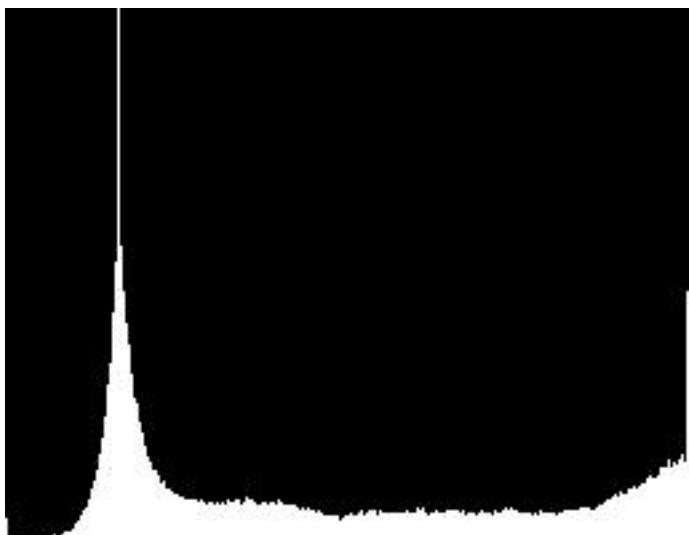
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Tamaño Color-> 11.9 KB

Tamaño Escala GRIS 9.0 KB



### Histogramas



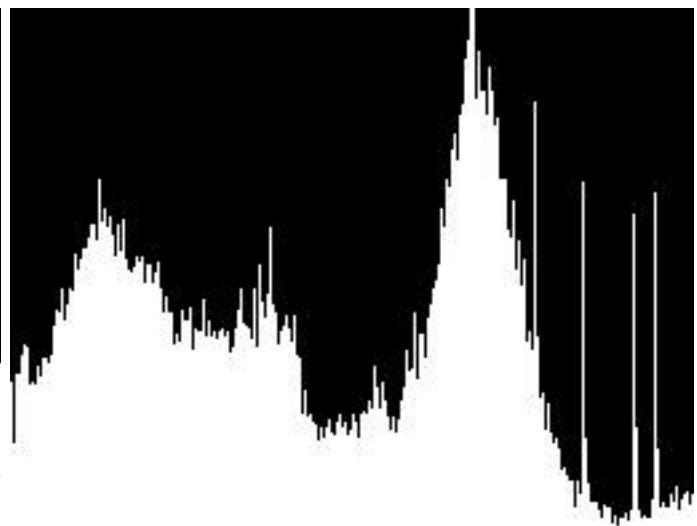
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Tamaño Color-> 15.5 KB

Tamaño Escala GRIS 12.7 KB



### Histogramas



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Tamaño Color-> 24.0 KB

Tamaño Escala GRIS 21.2 KB



### Histogramas



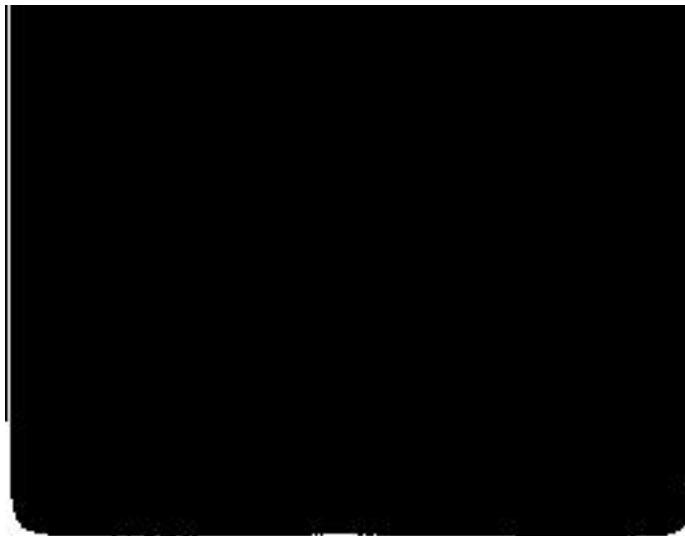
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Tamaño Color-> 14.8 KB

Tamaño Escala GRIS 12.8 KB



### Histogramas



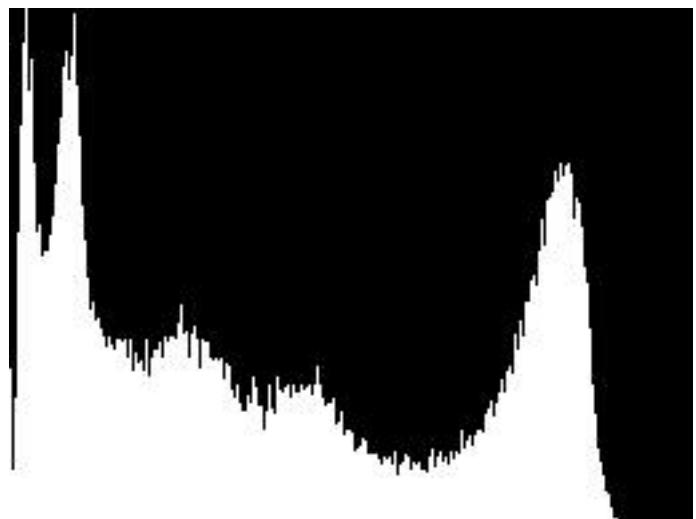
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Tamaño Color-> 19.6 KB

Tamaño Escala GRIS 16.6 KB



### Histogramas



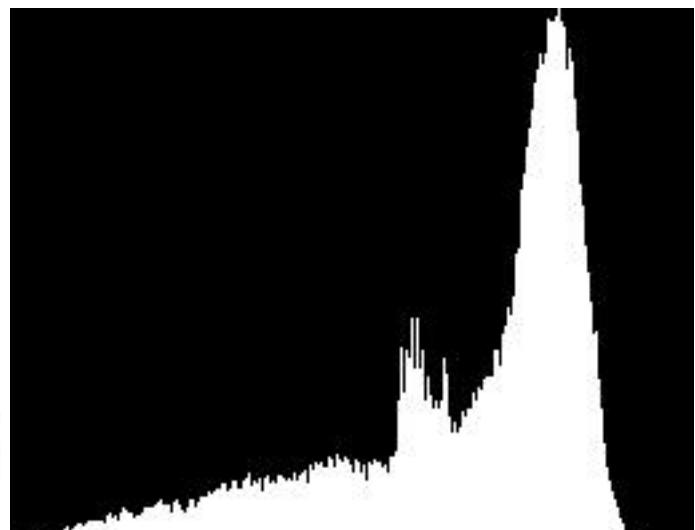
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Tamaño Escala GRIS 11.8 KB



### Histogramas



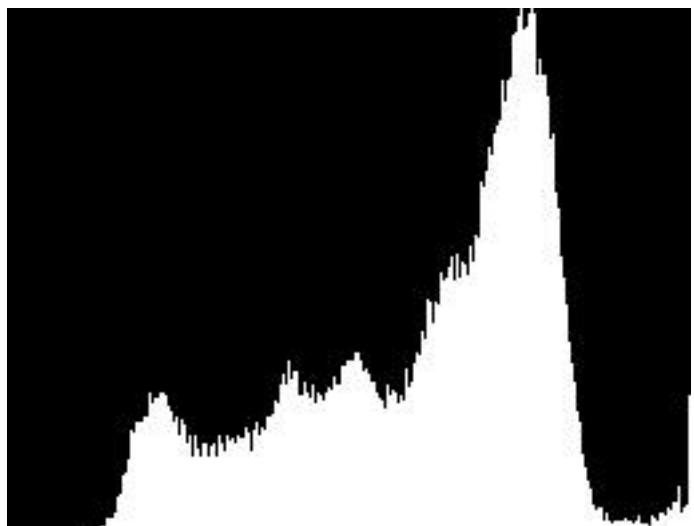
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Tamaño Escala GRIS 17.9 KB



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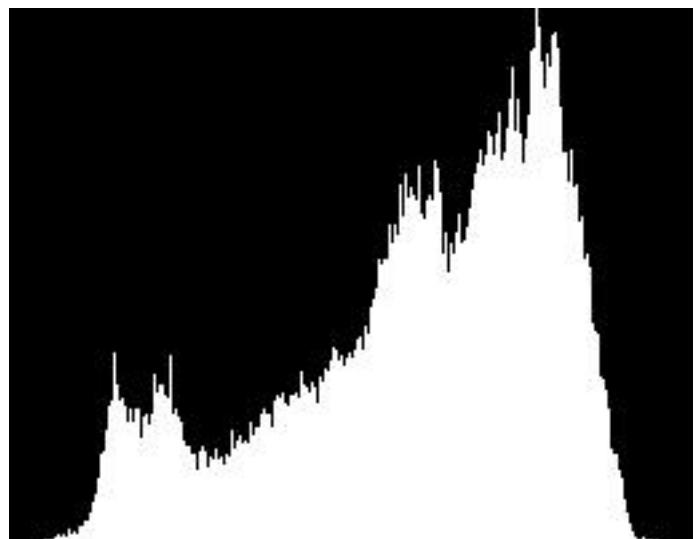
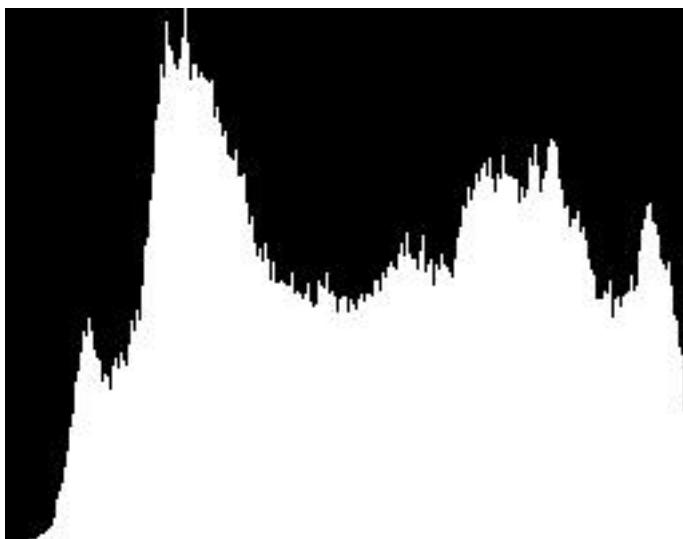
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Tamaño Escala GRIS 10.8 KB



### Histogramas



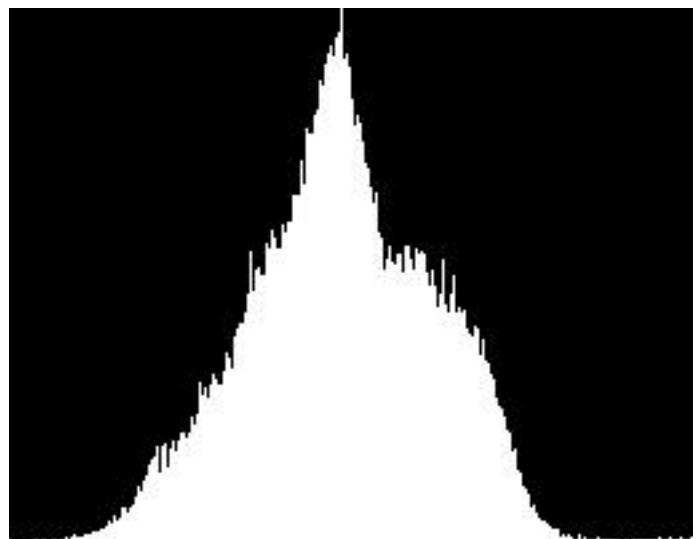
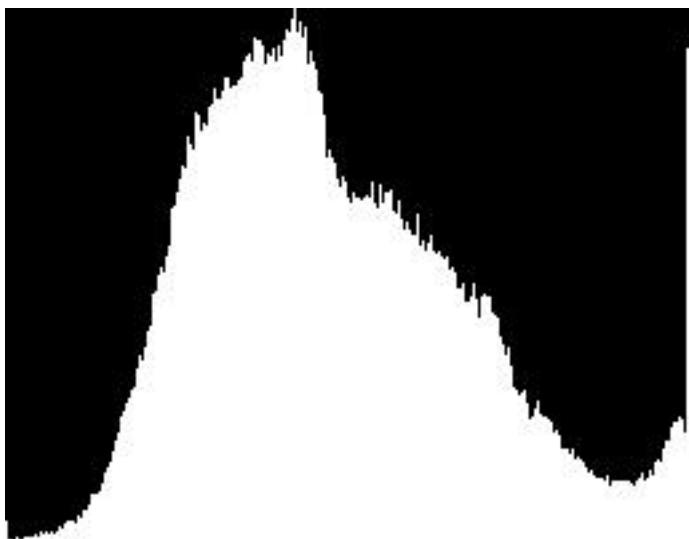
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Tamaño Color-> 17.3 KB

Tamaño Escala GRIS 14.3 KB



### Histogramas



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Tamaño Escala GRIS 11.8 KB



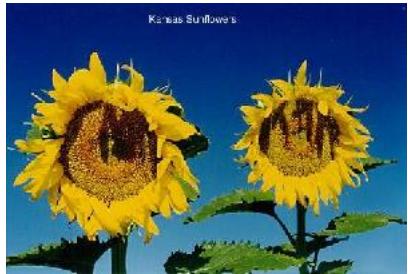
### Histogramas



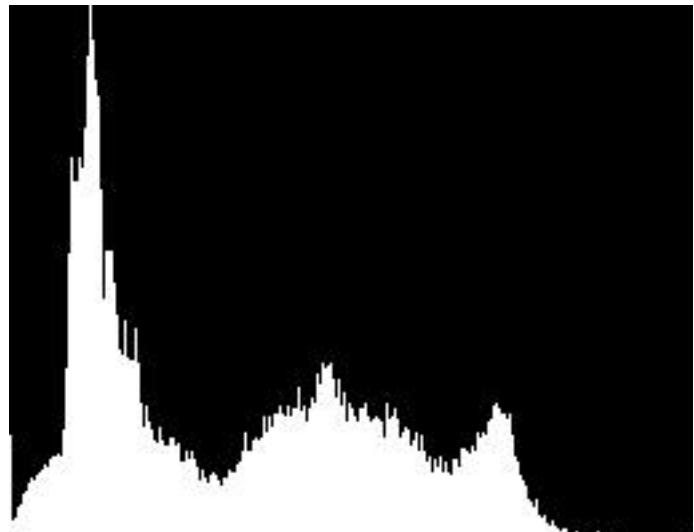
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Tamaño Color-> 16.2 KB

Tamaño Escala GRIS 13.1 KB



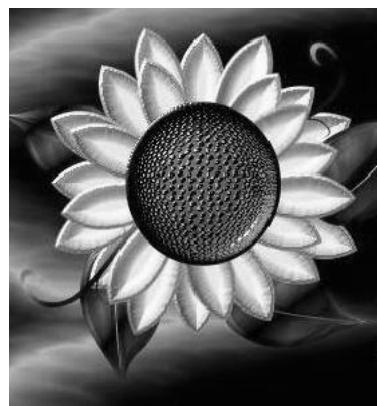
### Histogramas



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Tamaño Color-> 19.5 KB

Tamaño Escala GRIS 16.3 KB



### Histogramas



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Tamaño Color-> 16.5 KB

Tamaño Escala GRIS 14.3 KB



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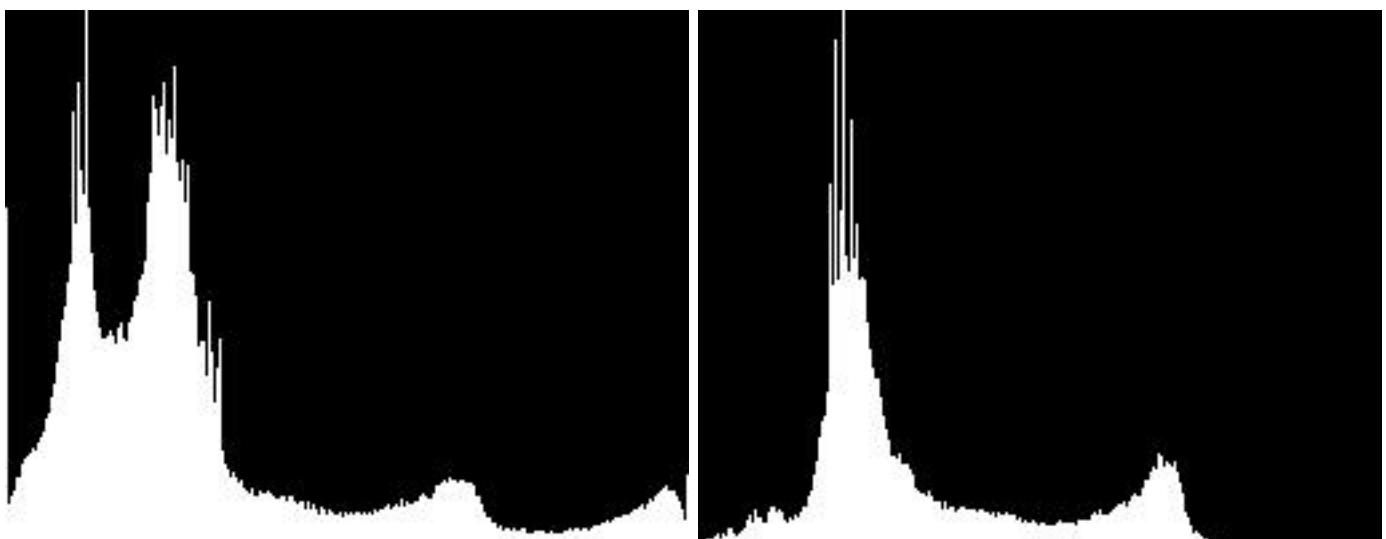
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Tamaño Color-> 11.5 KB

Tamaño Escala GRIS 8.9 KB



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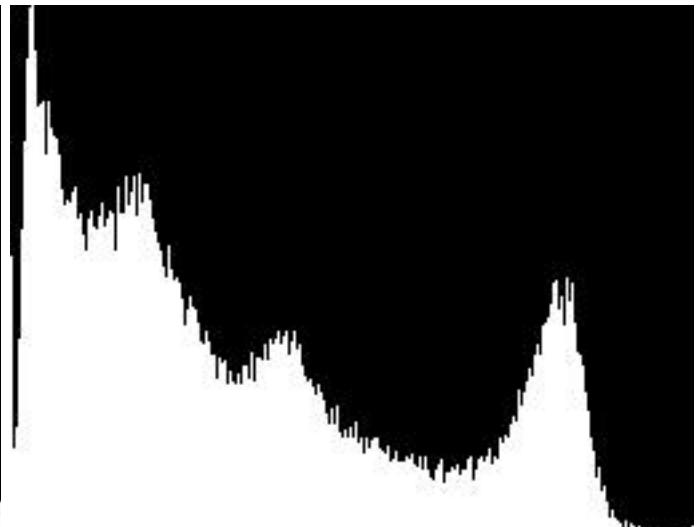
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Tamaño Color-> 20.7 KB

Tamaño Escala GRIS 18.1 KB



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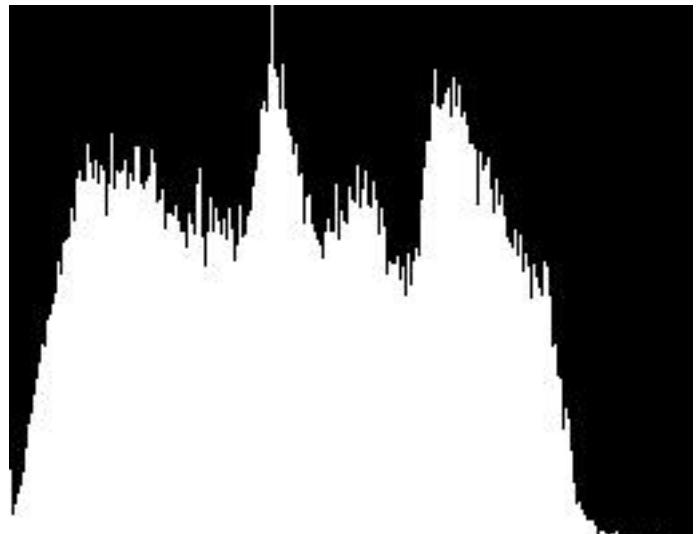
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Tamaño Color-> 17.2 KB

Tamaño Escala GRIS 14.5 KB



### Histogramas



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Tamaño Color-> 13.8 KB

Tamaño Escala GRIS 11.5 KB



### Histogramas



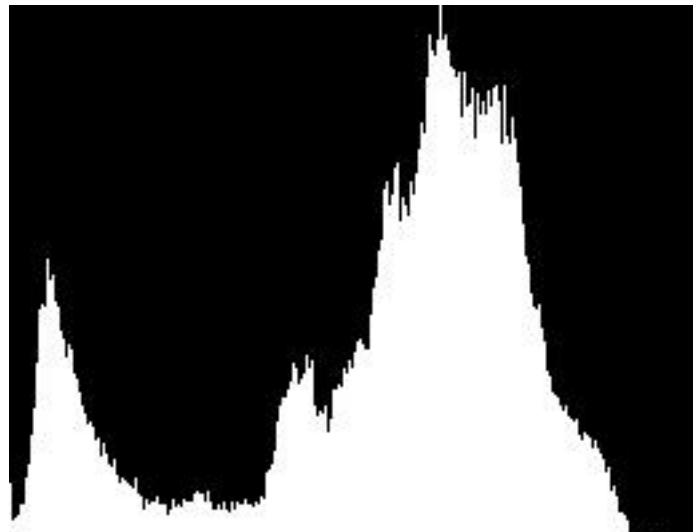
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Tamaño Color-> 14.4 KB

Tamaño Escala GRIS 11.5 KB



### Histogramas



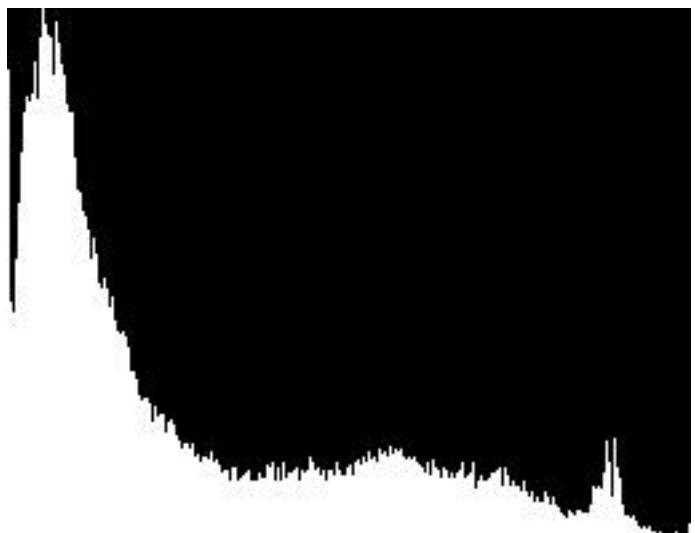
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Tamaño Color-> 20.2 KB

Tamaño Escala GRIS 17.5 KB



### Histogramas



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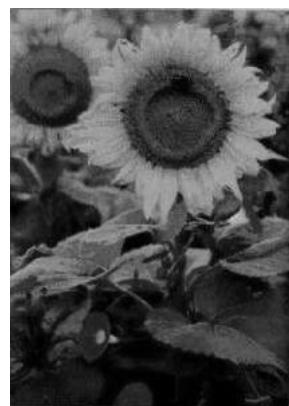
### Histogramas



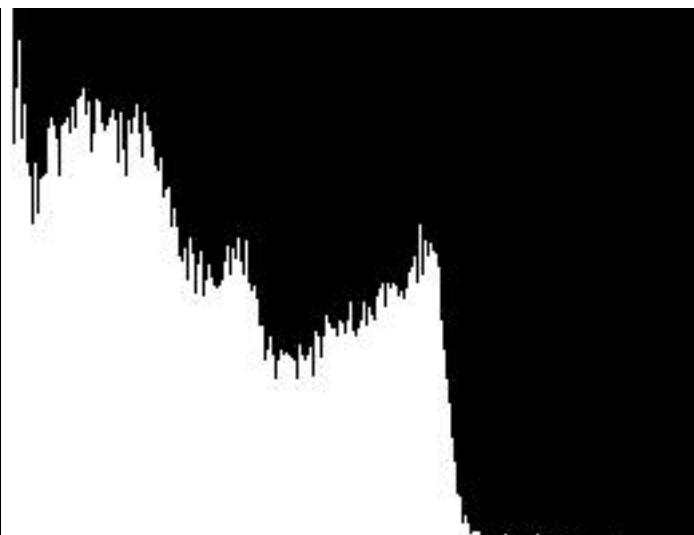
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Tamaño Color-> 13.9 KB

Tamaño Escala GRIS 11.1 KB



### Histogramas



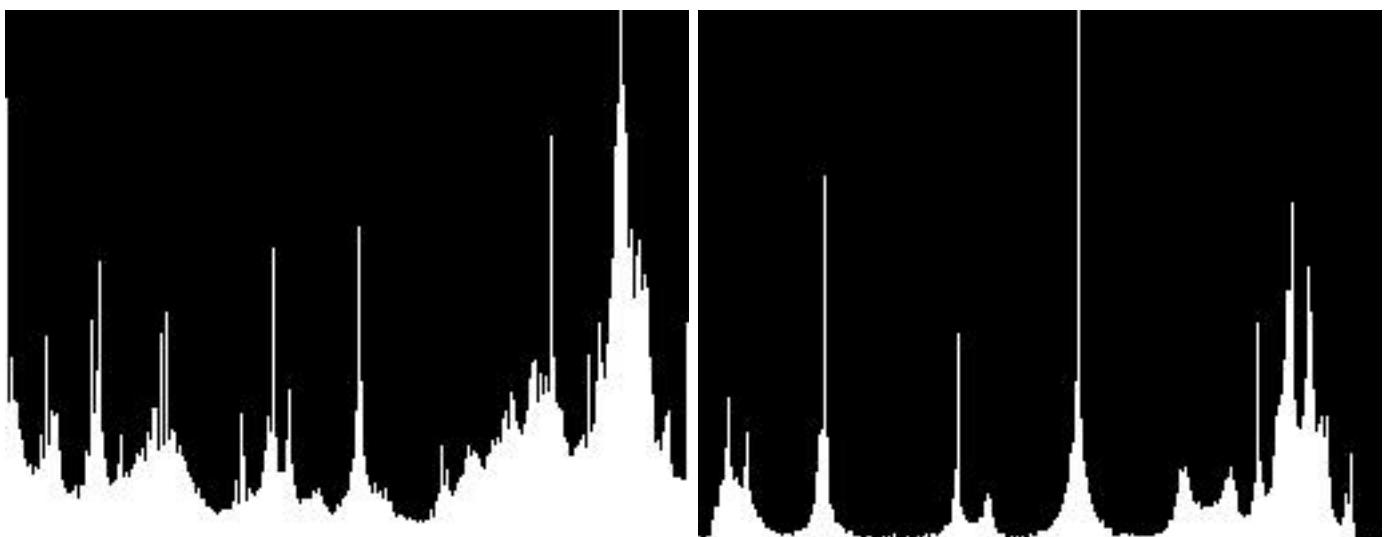
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Tamaño Color-> 9.8 KB

Tamaño Escala GRIS 7.6 KB



### Histogramas



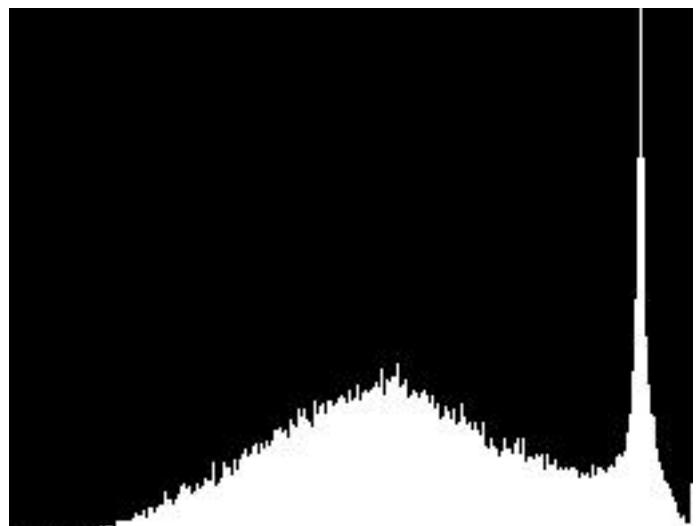
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Tamaño Color-> 21.4 KB

Tamaño Escala GRIS 18.4 KB



### Histogramas



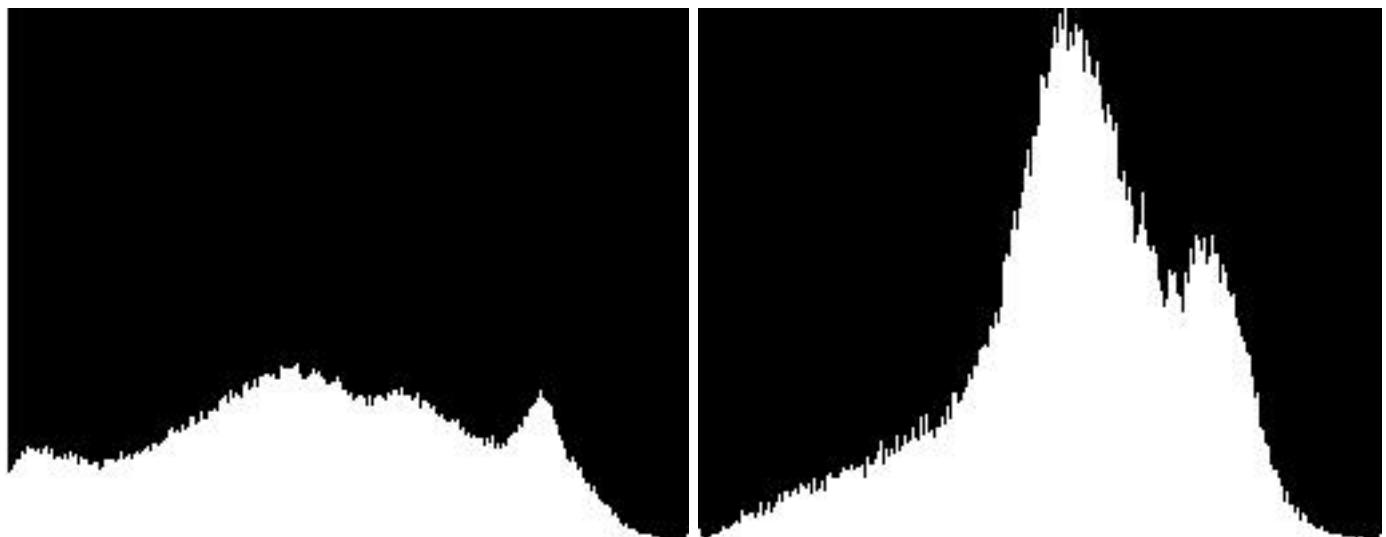
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Tamaño Color-> 19.5 KB

Tamaño Escala GRIS 17.0 KB



### Histogramas



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Tamaño Color-> 20.7 KB

Tamaño Escala GRIS 17.3 KB



### Histogramas



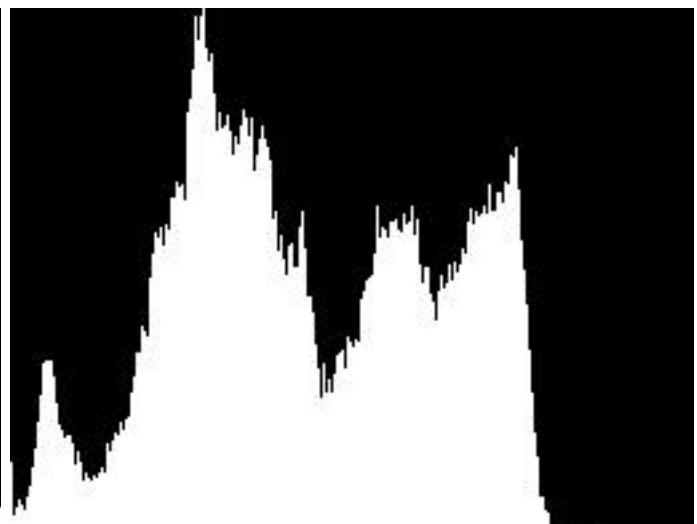
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Tamaño Color-> 14.2 KB

Tamaño Escala GRIS 11.2 KB



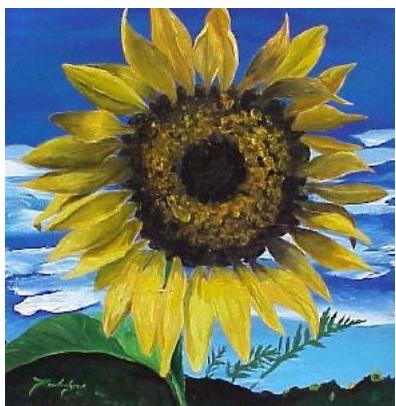
### Histogramas



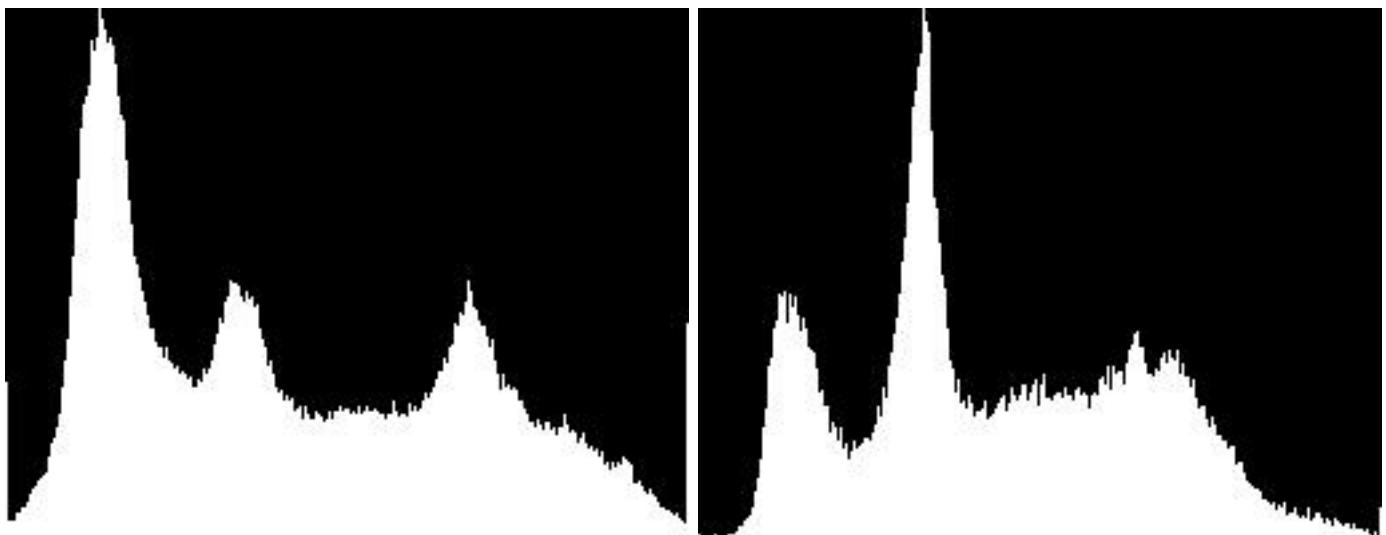
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Tamaño Color-> 23.5 KB

Tamaño Escala GRIS 19.3 KB



### Histogramas



Ruta Imagen: sunflower/image\_0034.jpg

Tamaño Color-> 12.6 KB

Tamaño Escala GRIS 10.2 KB



### Histogramas



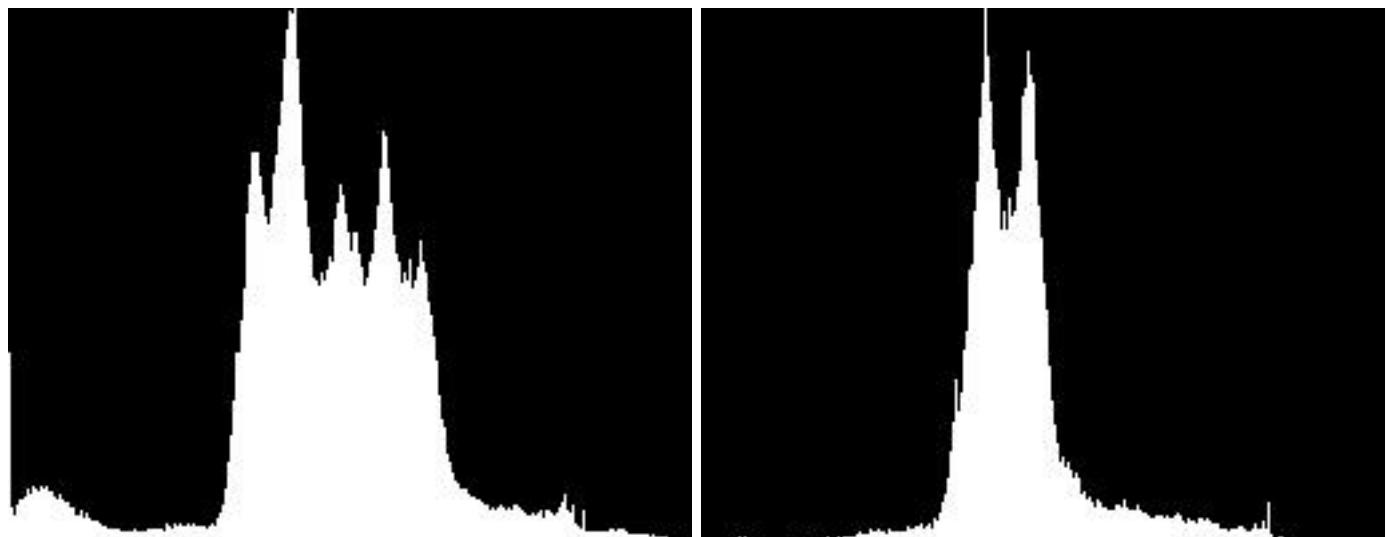
Ruta Imagen: sunflower/image\_0035.jpg

Tamaño Color-> 8.3 KB

Tamaño Escala GRIS 6.4 KB



### Histogramas



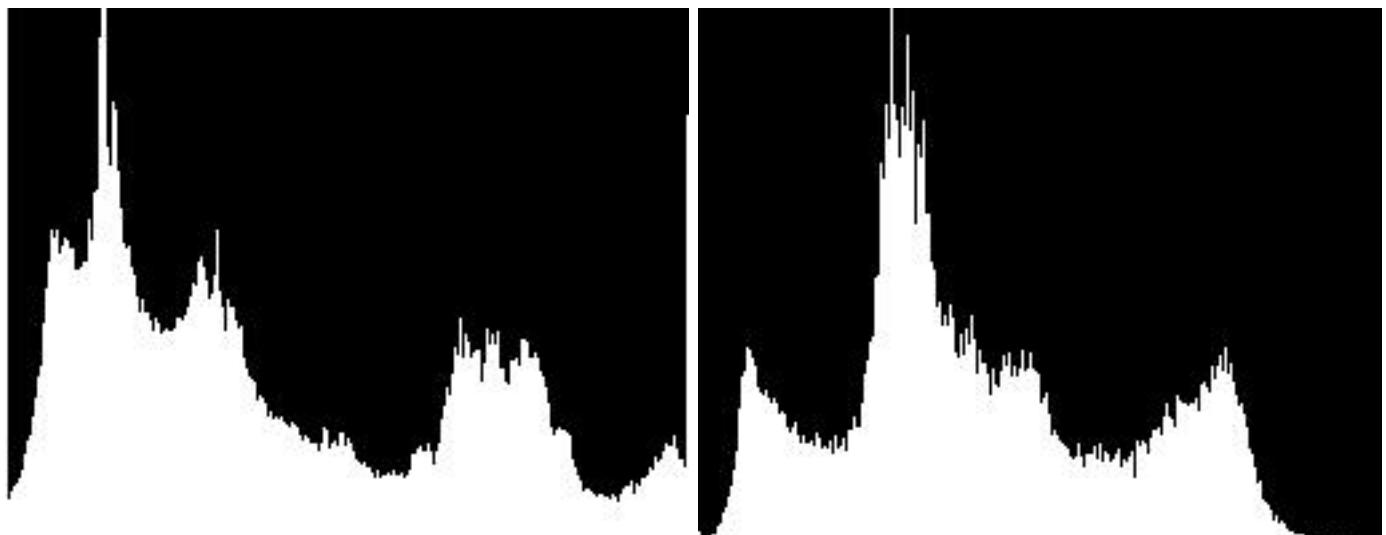
Ruta Imagen: sunflower/image\_0036.jpg

Tamaño Color-> 14.9 KB

Tamaño Escala GRIS 12.3 KB



### Histogramas



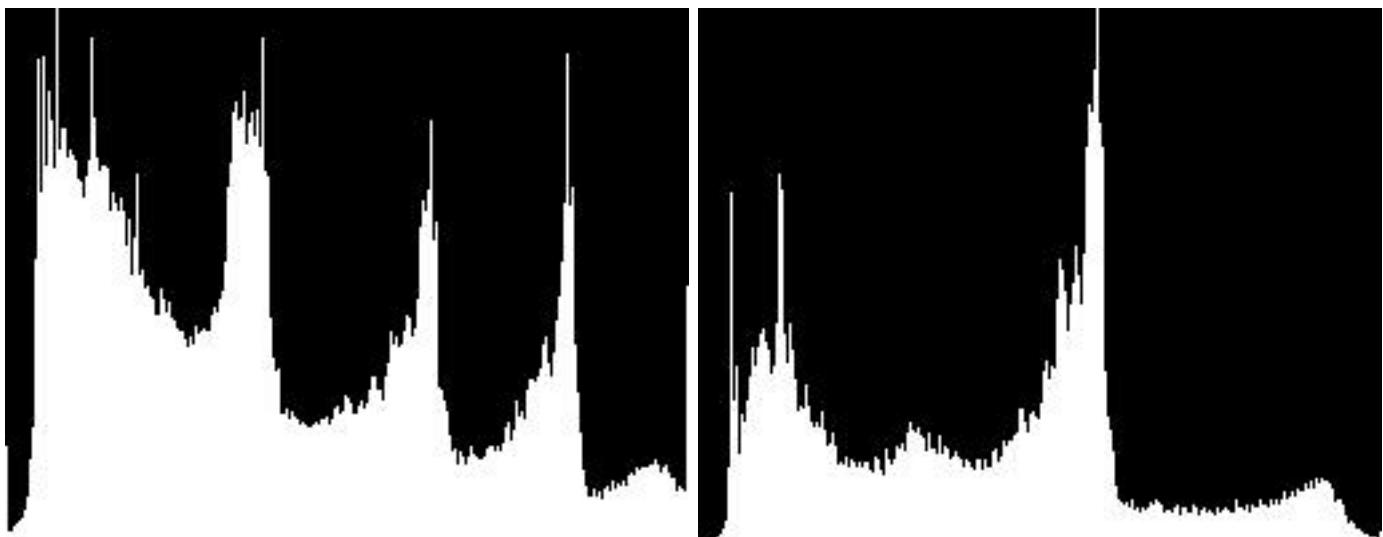
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Tamaño Color-> 11.4 KB

Tamaño Escala GRIS 9.4 KB



### Histogramas



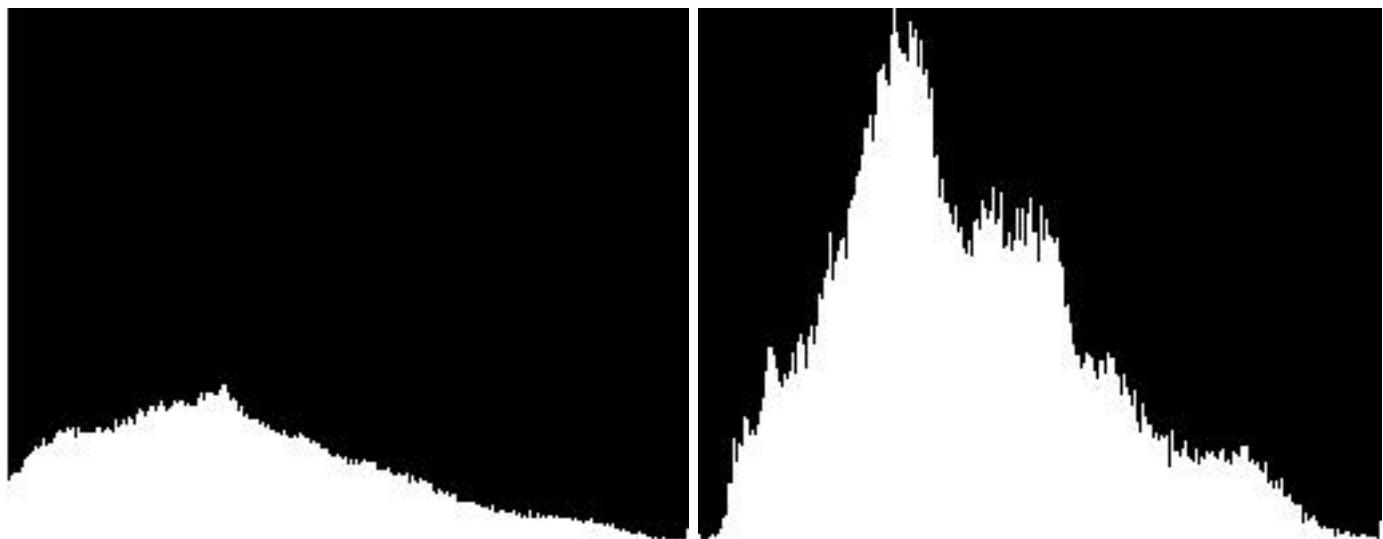
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Tamaño Color-> 17.4 KB

Tamaño Escala GRIS 14.9 KB



### Histogramas



Ruta Imagen: sunflower/image\_0039.jpg

Tamaño Color-> 12.1 KB

Tamaño Escala GRIS 9.4 KB



### Histogramas



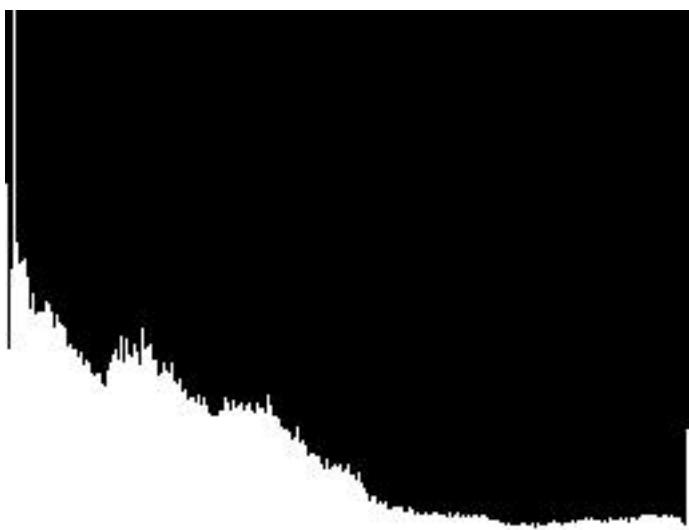
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Tamaño Color-> 12.6 KB

Tamaño Escala GRIS 10.5 KB



### Histogramas



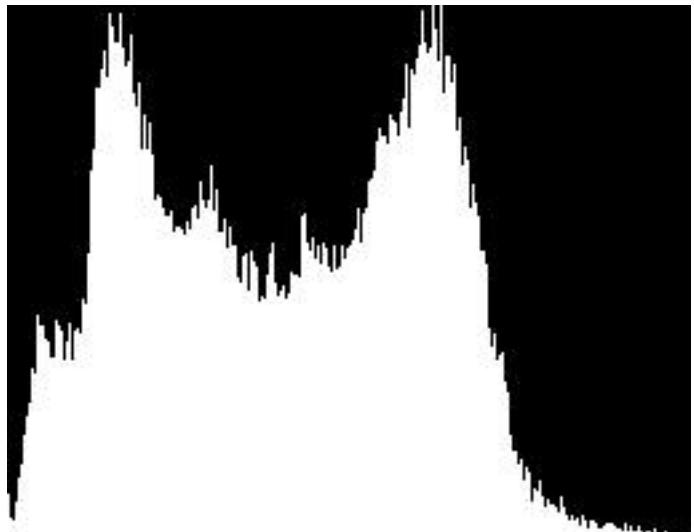
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Tamaño Escala GRIS 11.1 KB



### Histogramas



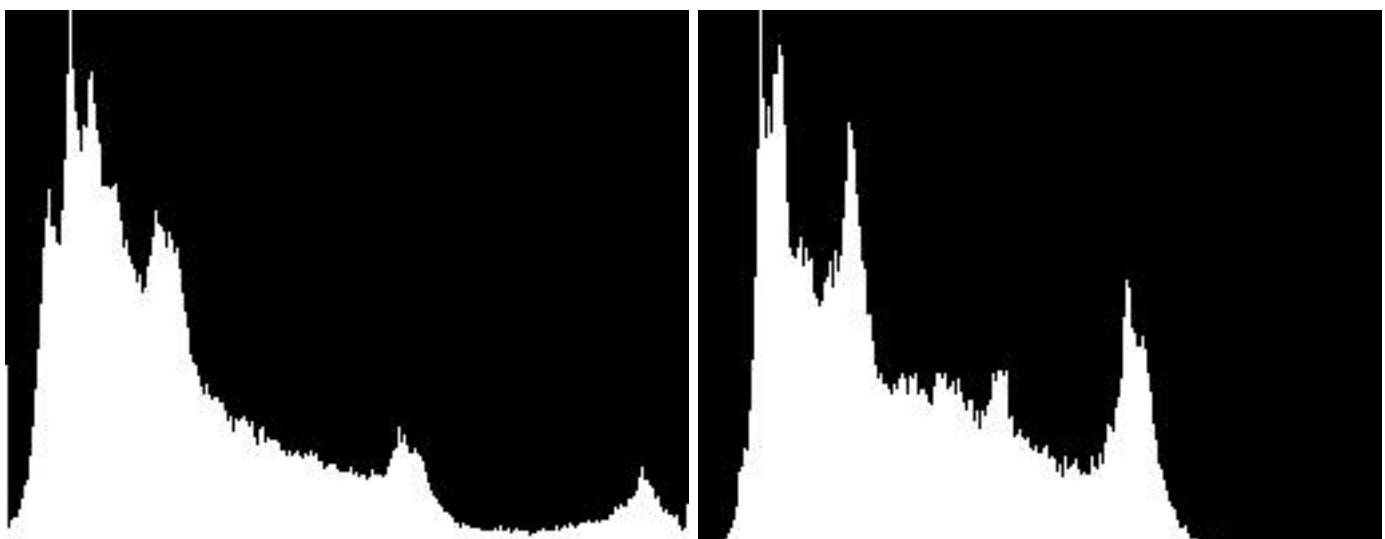
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Tamaño Color-> 11.0 KB

Tamaño Escala GRIS 8.9 KB



### Histogramas



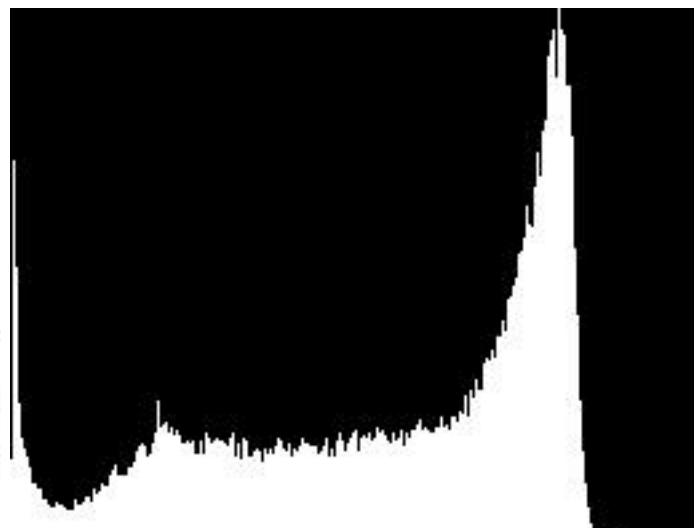
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Tamaño Color-> 19.2 KB

Tamaño Escala GRIS 15.9 KB



### Histogramas



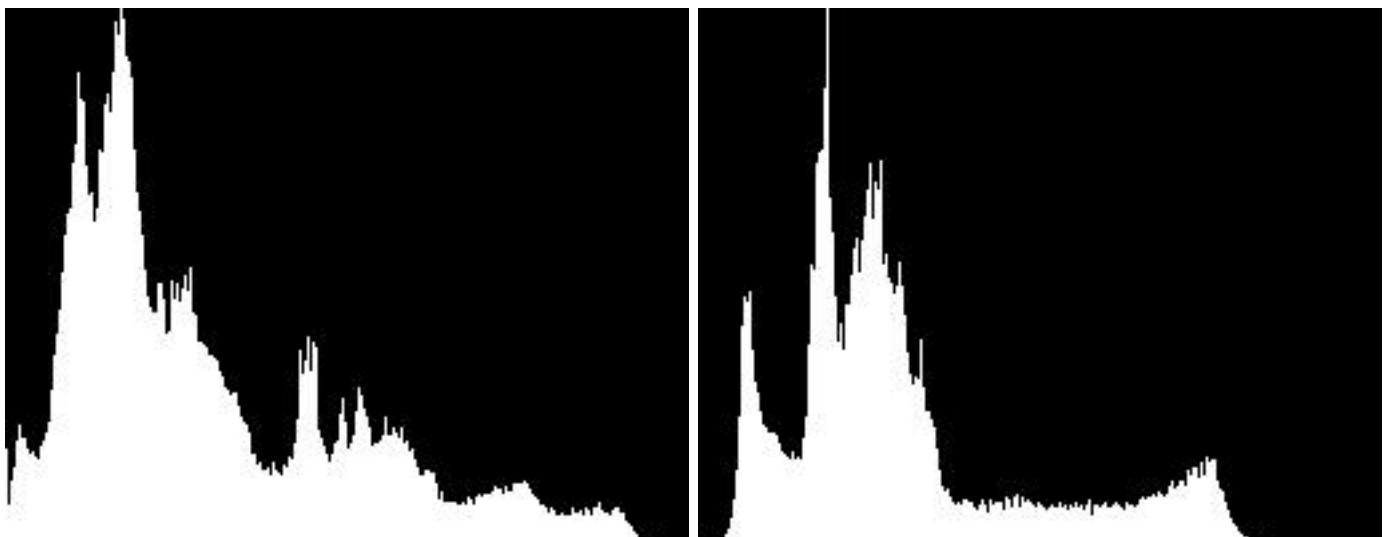
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Tamaño Color-> 11.5 KB

Tamaño Escala GRIS 9.2 KB



### Histogramas



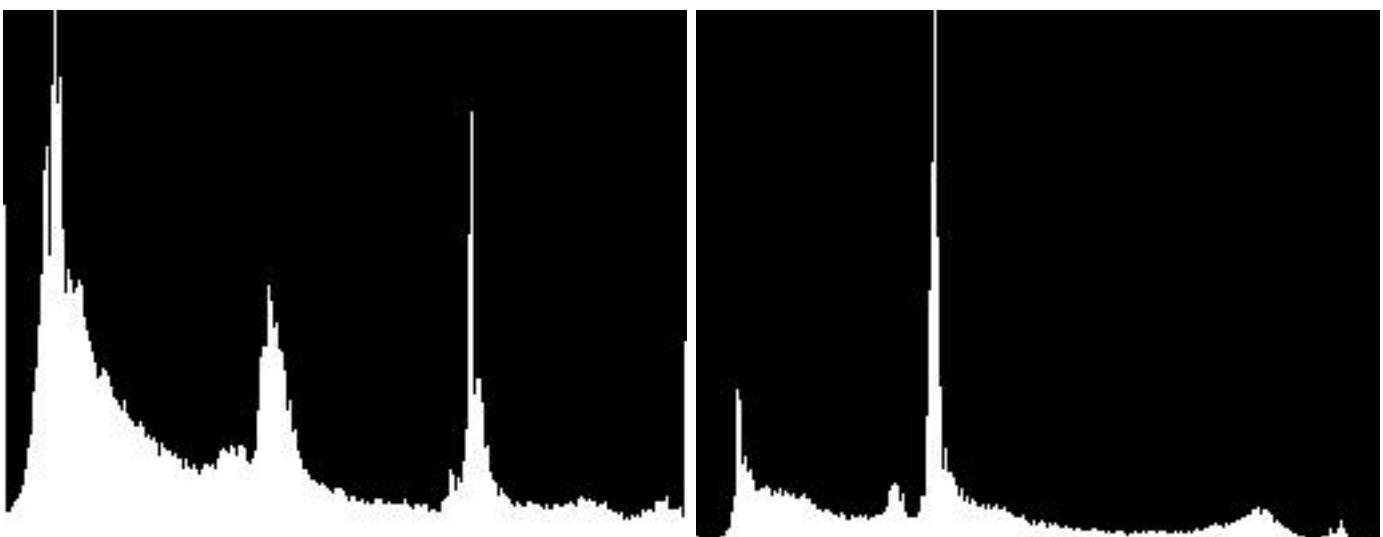
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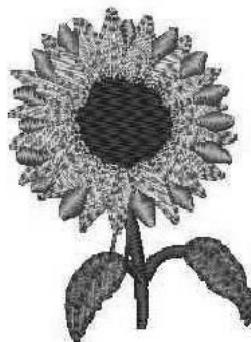
### Histogramas



Ruta Imagen: sunflower/image\_0046.jpg

Tamaño Color-> 14.8 KB

Tamaño Escala GRIS 12.9 KB



### Histogramas



Ruta Imagen: sunflower/image\_0047.jpg

Tamaño Color-> 15.3 KB

Tamaño Escala GRIS 12.5 KB



### Histogramas



Ruta Imagen: sunflower/image\_0048.jpg

Tamaño Color-> 10.2 KB

Tamaño Escala GRIS 7.8 KB



### Histogramas



Ruta Imagen: sunflower/image\_0049.jpg

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Tamaño Escala GRIS 12.2 KB



### Histogramas



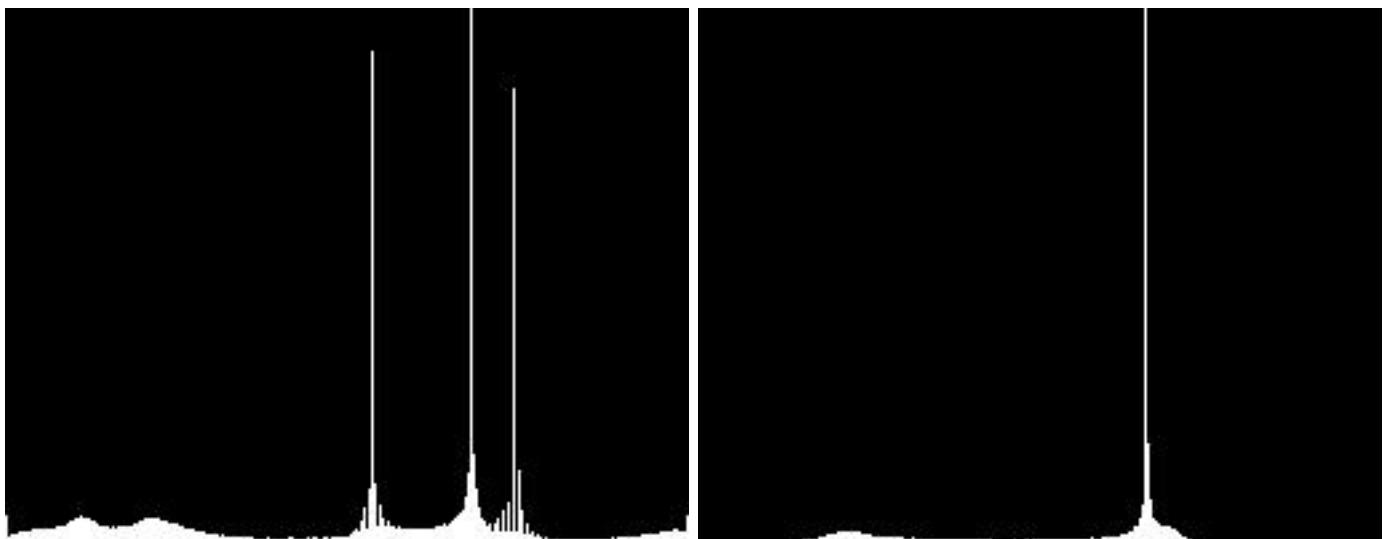
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Tamaño Color-> 8.3 KB

Tamaño Escala GRIS 6.1 KB



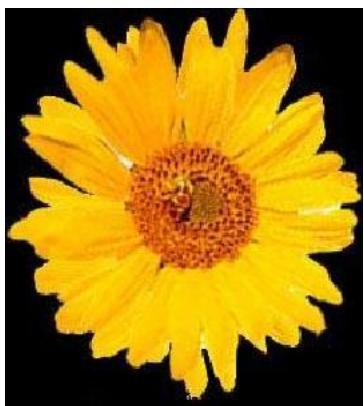
### Histogramas



Ruta Imagen: sunflower/image\_0051.jpg

Tamaño Color-> 14.4 KB

Tamaño Escala GRIS 11.6 KB



### Histogramas



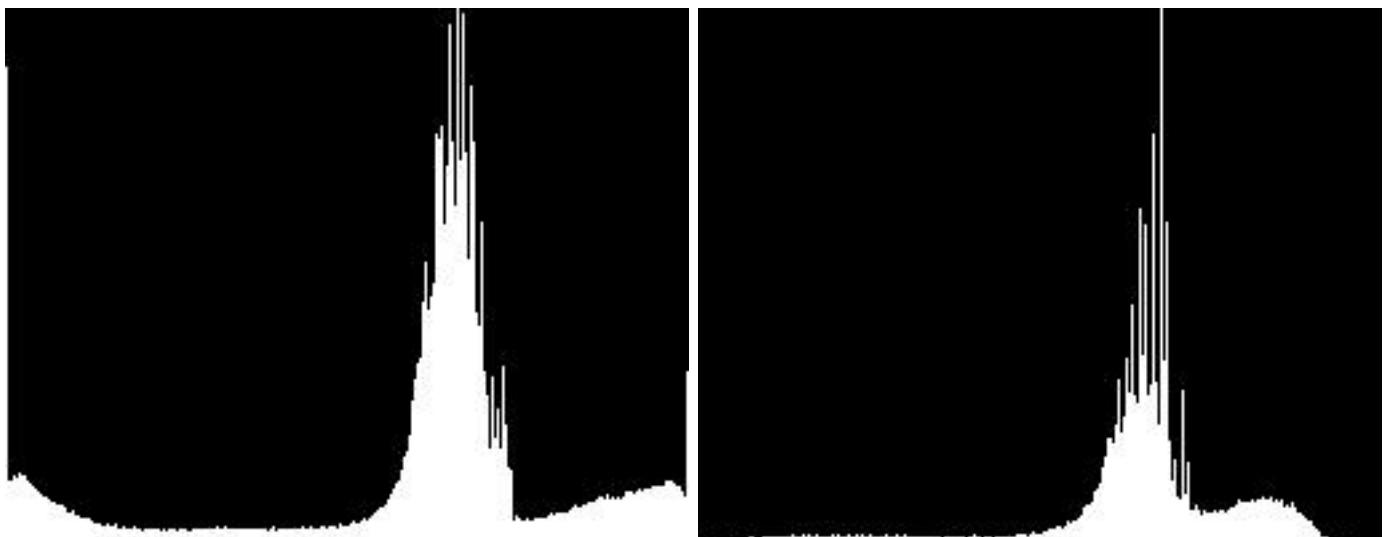
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Tamaño Color-> 11.6 KB

Tamaño Escala GRIS 9.2 KB



### Histogramas



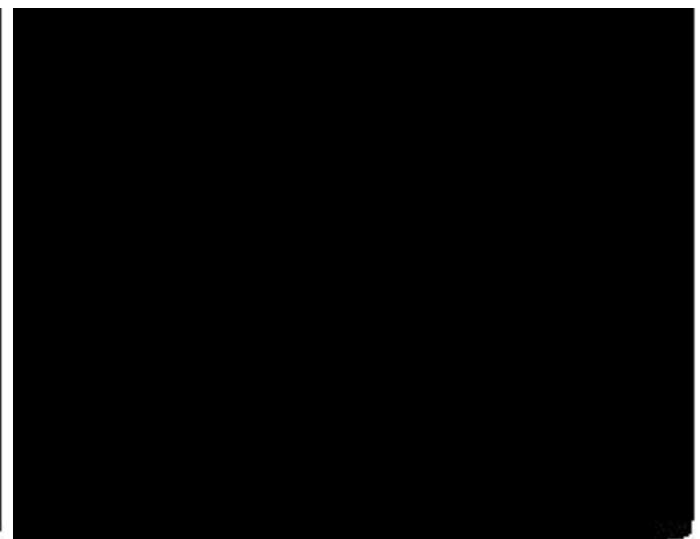
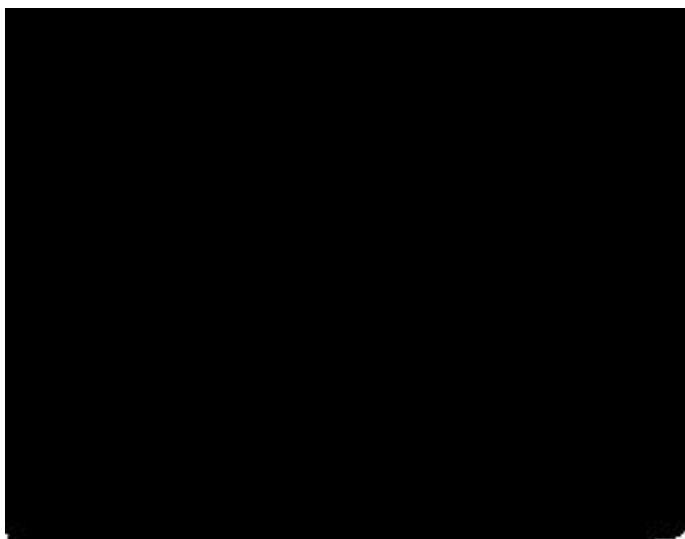
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Tamaño Color-> 8.7 KB

Tamaño Escala GRIS 6.6 KB



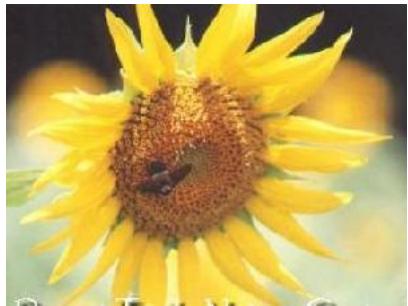
### Histogramas



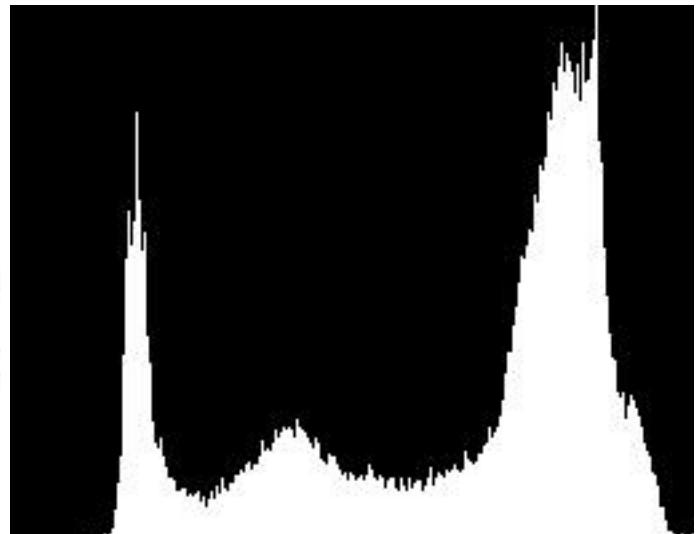
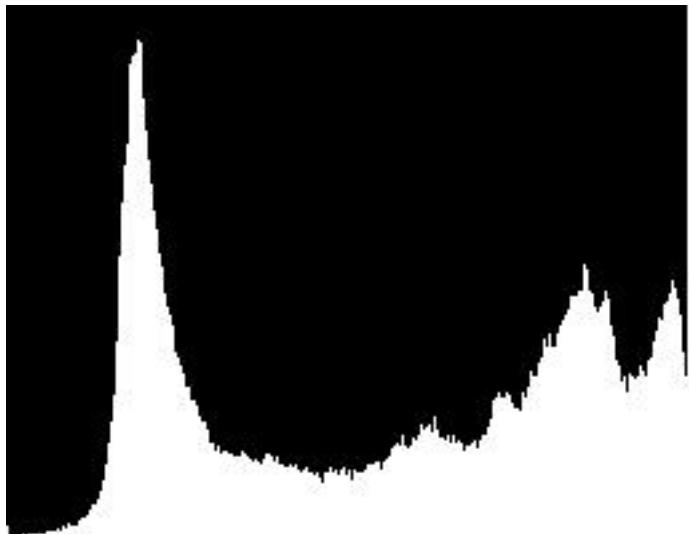
Ruta Imagen: sunflower/image\_0054.jpg

Tamaño Color-> 11.6 KB

Tamaño Escala GRIS 9.0 KB



### Histogramas



Ruta Imagen: sunflower/image\_0055.jpg

Tamaño Color-> 10.5 KB

Tamaño Escala GRIS 8.3 KB



### Histogramas



Ruta Imagen: sunflower/image\_0056.jpg

Tamaño Color-> 14.3 KB

Tamaño Escala GRIS 12.3 KB



### Histogramas



Ruta Imagen: sunflower/image\_0057.jpg

Tamaño Color-> 14.8 KB

Tamaño Escala GRIS 11.9 KB



### Histogramas



Ruta Imagen: sunflower/image\_0058.jpg

Tamaño Color-> 15.2 KB

Tamaño Escala GRIS 12.4 KB



### Histogramas



Ruta Imagen: sunflower/image\_0059.jpg

Tamaño Color-> 13.6 KB

Tamaño Escala GRIS 11.1 KB



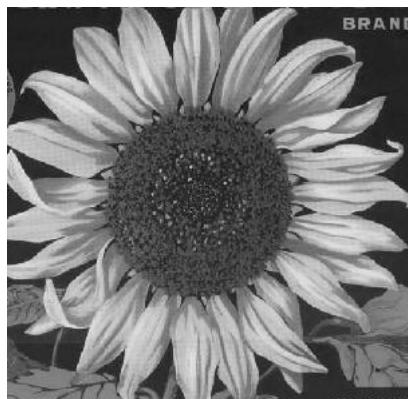
### Histogramas



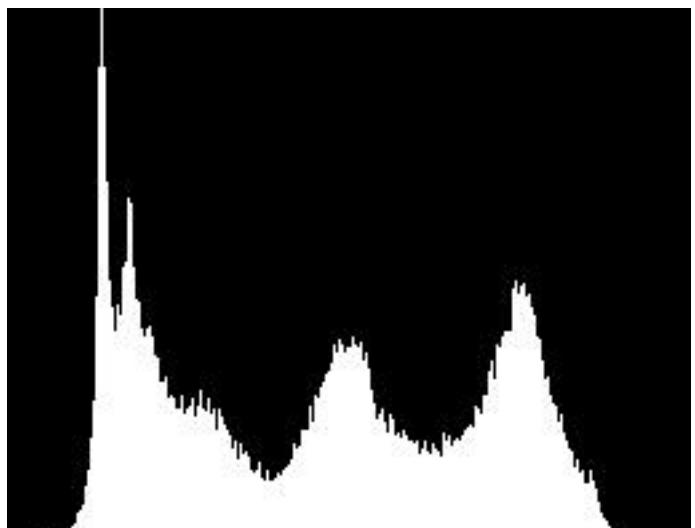
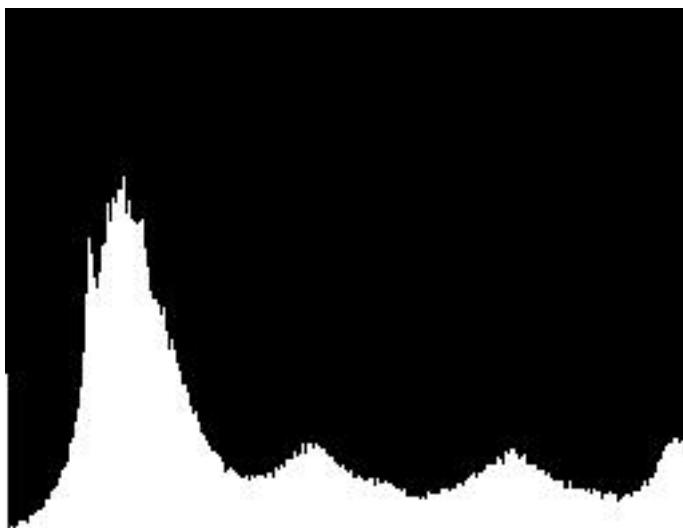
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Tamaño Color-> 24.0 KB

Tamaño Escala GRIS 19.9 KB



### Histogramas



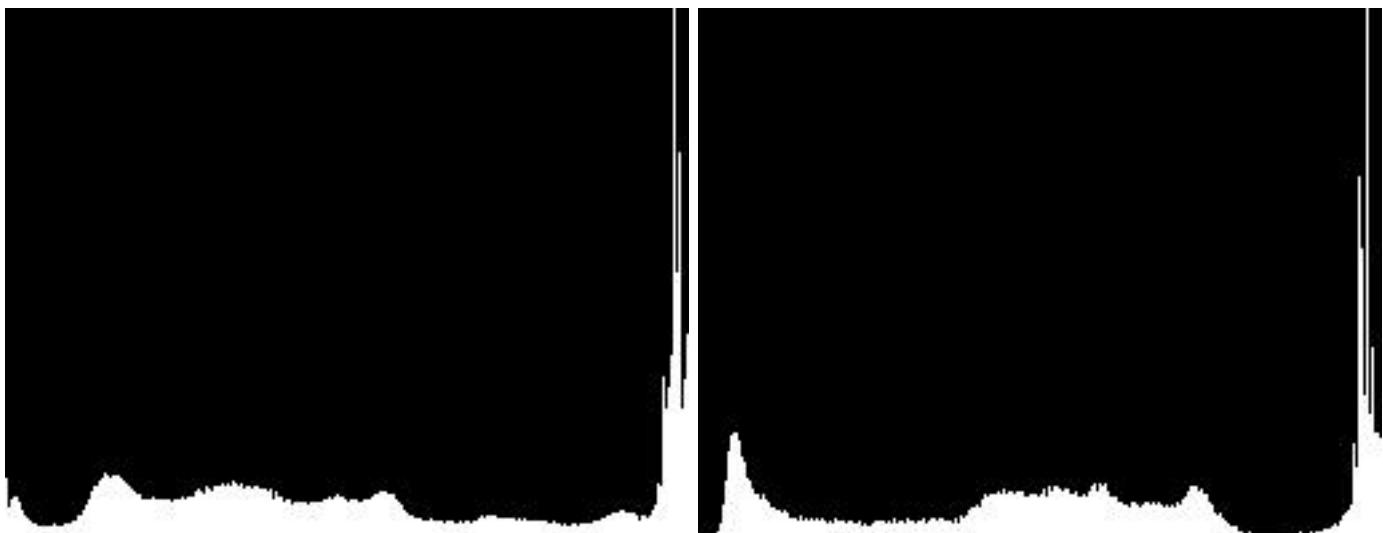
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Tamaño Escala GRIS 11.1 KB



### Histogramas



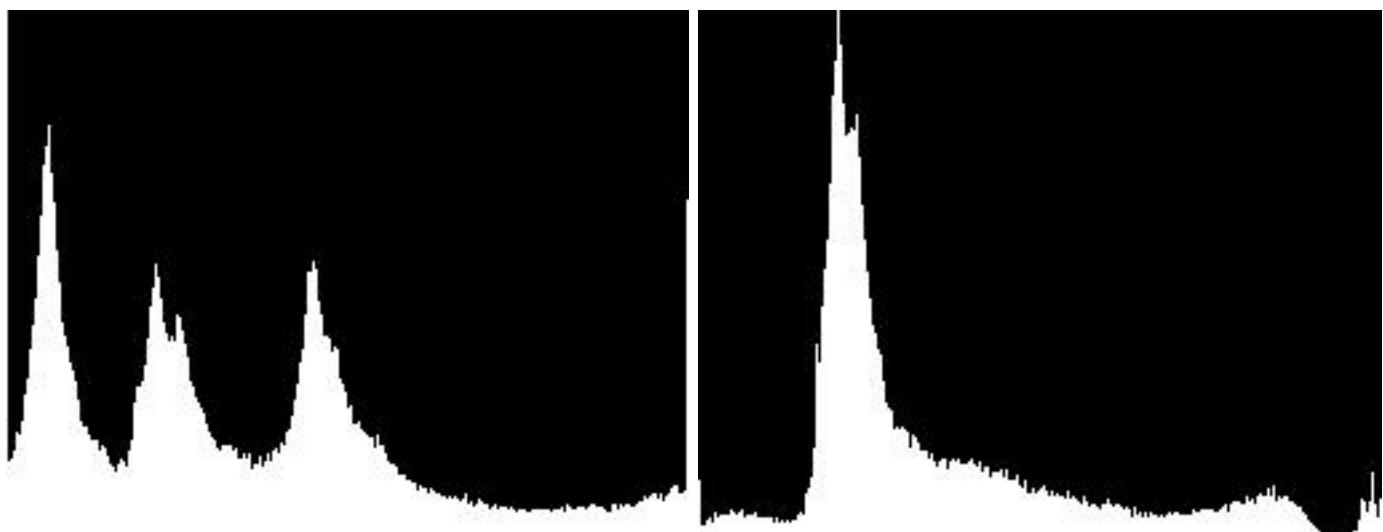
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Tamaño Color-> 19.9 KB

Tamaño Escala GRIS 15.9 KB



### Histogramas



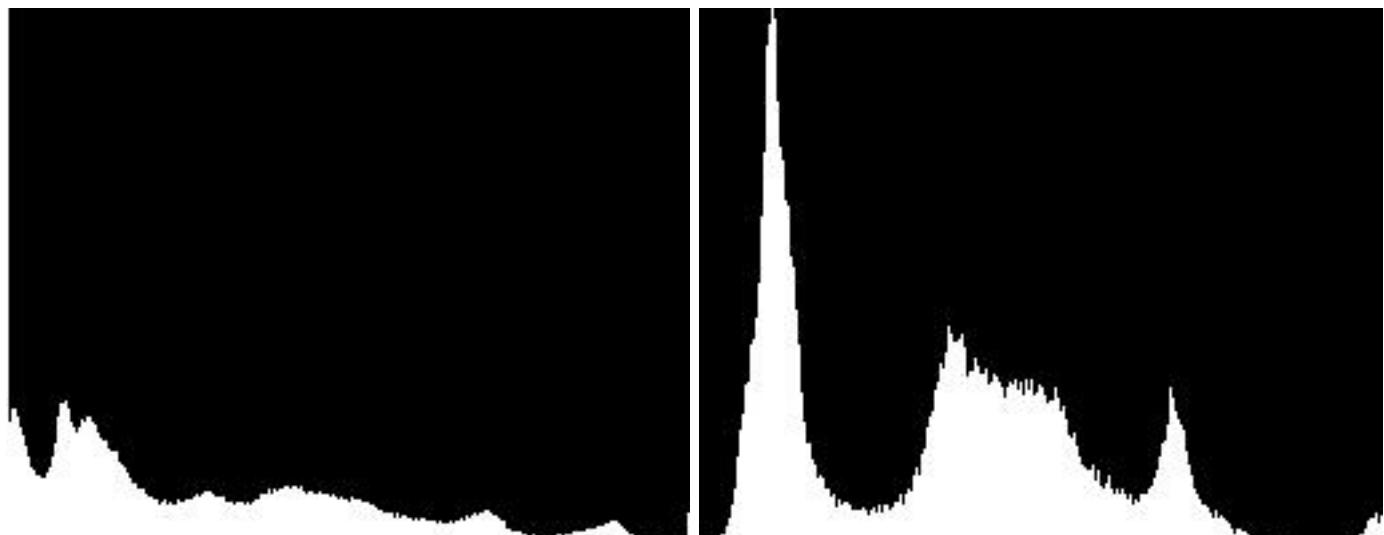
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Tamaño Color-> 13.1 KB

Tamaño Escala GRIS 10.9 KB



### Histogramas



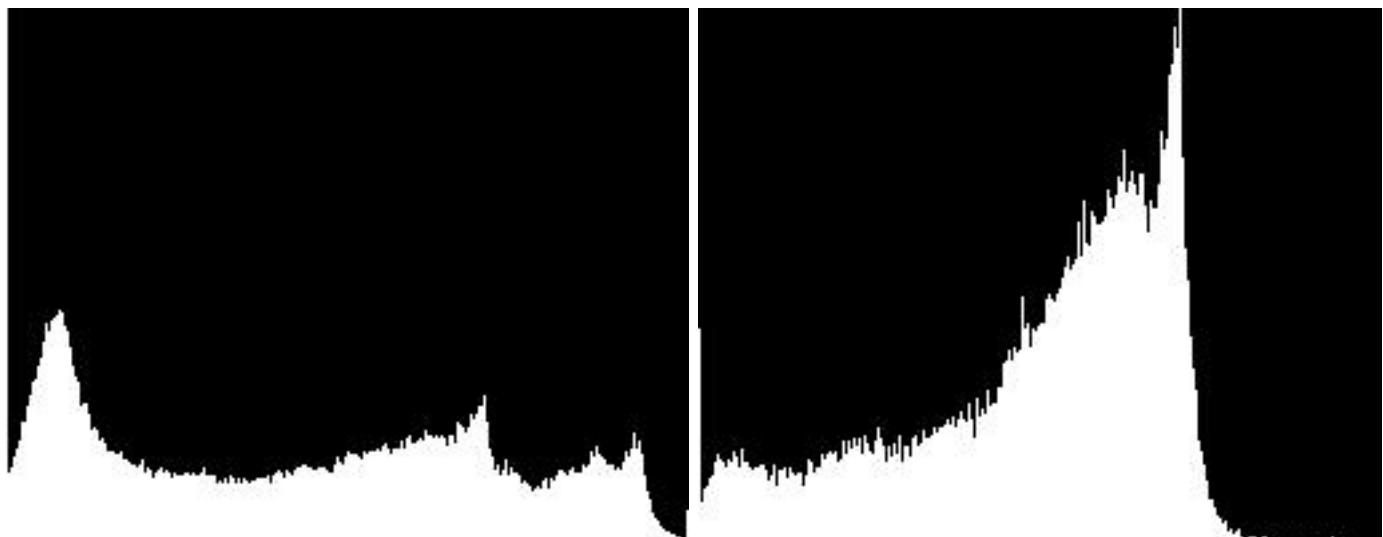
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Tamaño Color-> 15.0 KB

Tamaño Escala GRIS 12.4 KB



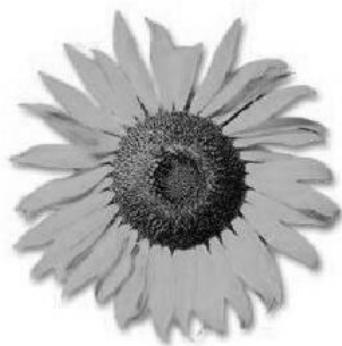
### Histogramas



Ruta Imagen: sunflower/image\_0065.jpg

Tamaño Color-> 13.0 KB

Tamaño Escala GRIS 9.9 KB



### Histogramas



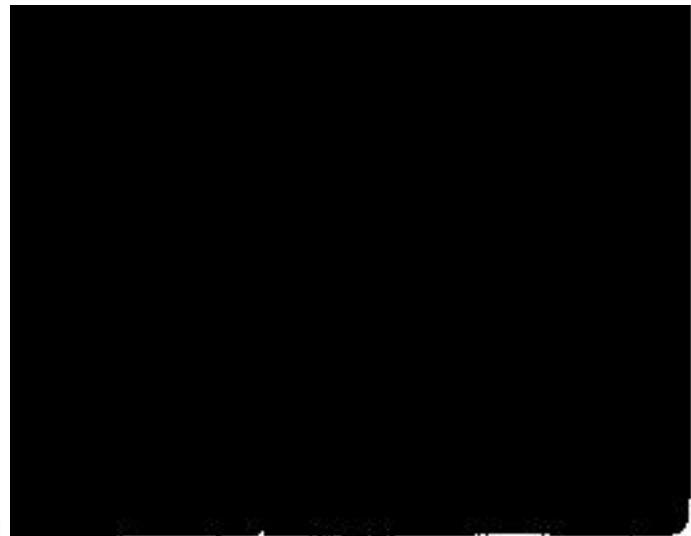
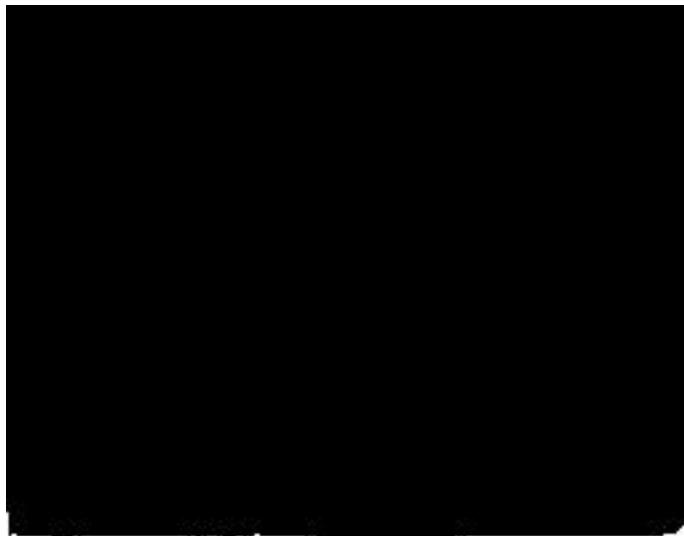
Ruta Imagen: sunflower/image\_0066.jpg

Tamaño Color-> 9.9 KB

Tamaño Escala GRIS 8.0 KB



### Histogramas



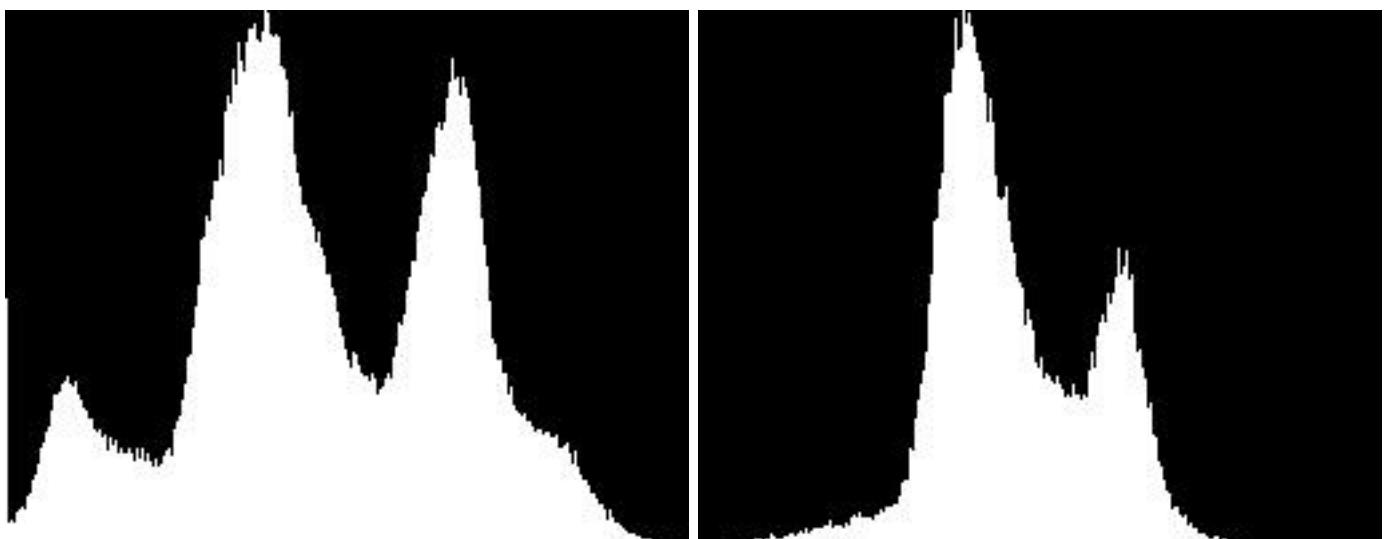
Ruta Imagen: sunflower/image\_0067.jpg

Tamaño Color-> 14.9 KB

Tamaño Escala GRIS 12.1 KB



### Histogramas



Ruta Imagen: sunflower/image\_0068.jpg

Tamaño Color-> 14.1 KB

Tamaño Escala GRIS 11.6 KB



### Histogramas



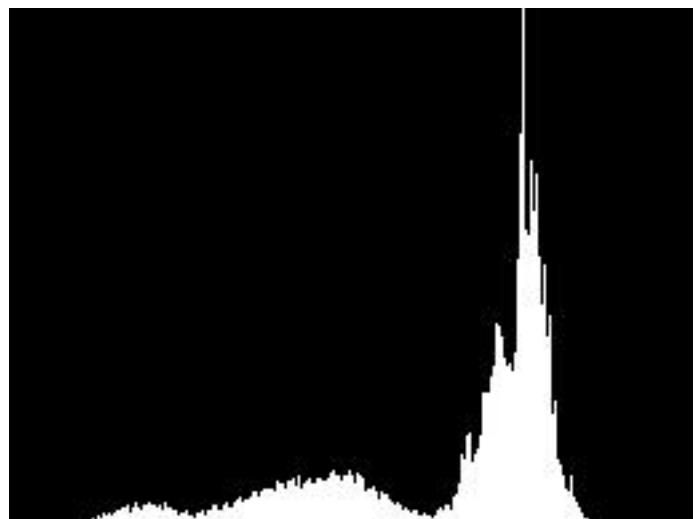
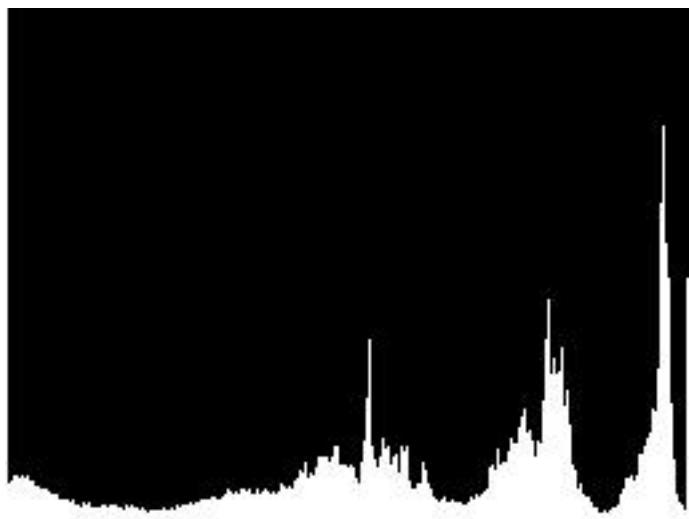
Ruta Imagen: sunflower/image\_0069.jpg

Tamaño Color-> 14.9 KB

Tamaño Escala GRIS 11.7 KB



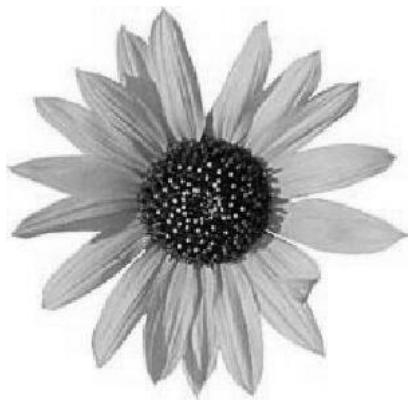
### Histogramas



Ruta Imagen: sunflower/image\_0070.jpg

Tamaño Color-> 16.1 KB

Tamaño Escala GRIS 12.9 KB



### Histogramas



Ruta Imagen: sunflower/image\_0071.jpg

Tamaño Color-> 11.9 KB

Tamaño Escala GRIS 9.1 KB



### Histogramas



Ruta Imagen: sunflower/image\_0072.jpg

Tamaño Color-> 18.3 KB

Tamaño Escala GRIS 15.4 KB



### Histogramas



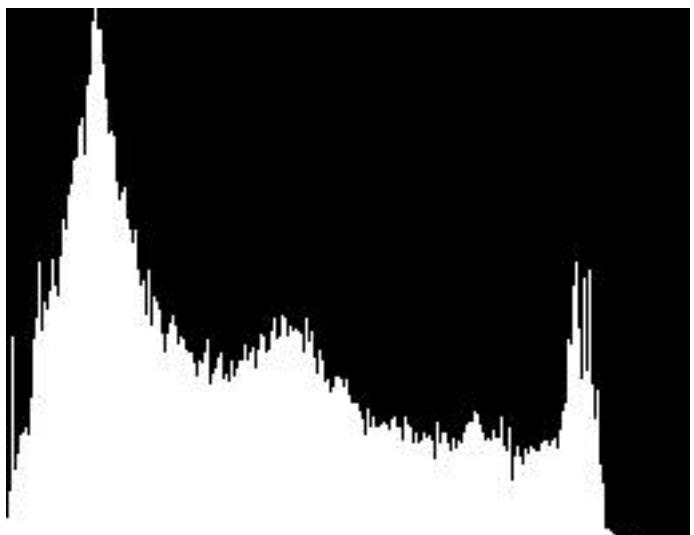
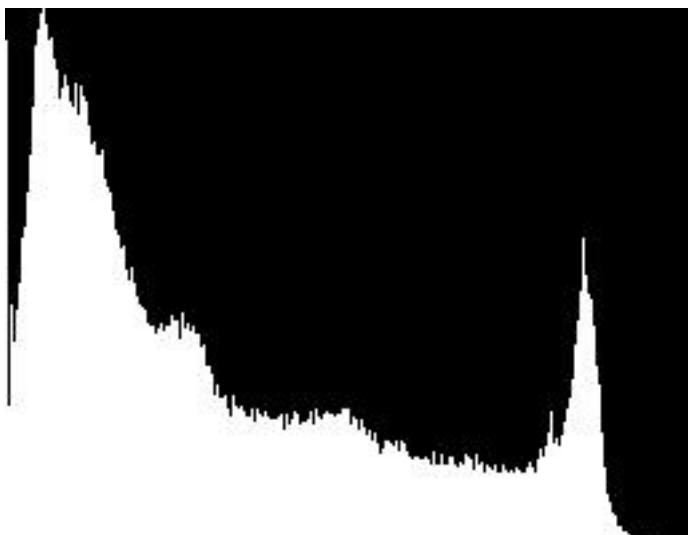
Ruta Imagen: sunflower/image\_0073.jpg

Tamaño Color-> 11.7 KB

Tamaño Escala GRIS 9.5 KB



### Histogramas



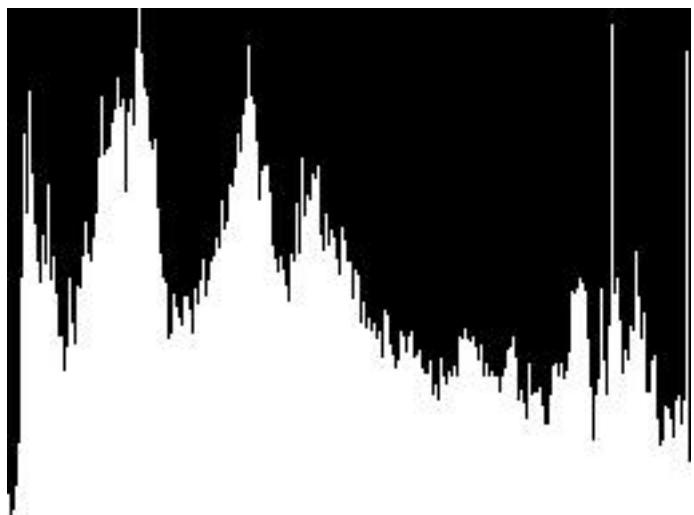
Ruta Imagen: sunflower/image\_0074.jpg

Tamaño Color-> 11.9 KB

Tamaño Escala GRIS 9.5 KB



### Histogramas



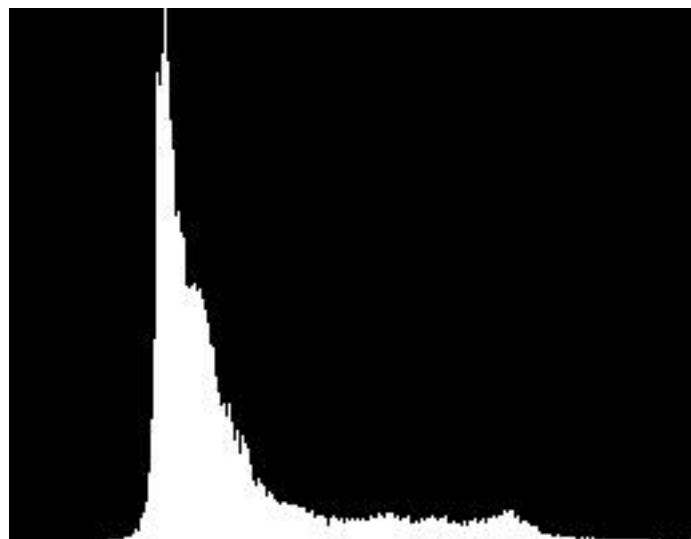
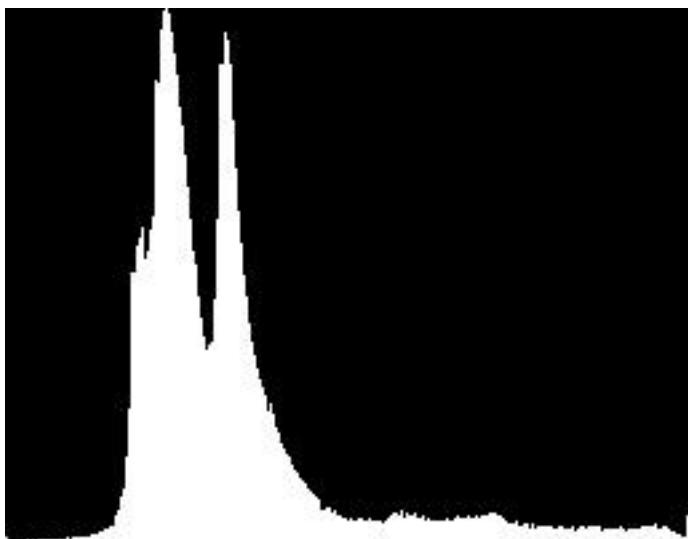
Ruta Imagen: sunflower/image\_0075.jpg

Tamaño Color-> 11.1 KB

Tamaño Escala GRIS 9.3 KB



### Histogramas



Ruta Imagen: sunflower/image\_0076.jpg

Tamaño Color-> 15.8 KB

Tamaño Escala GRIS 13.0 KB



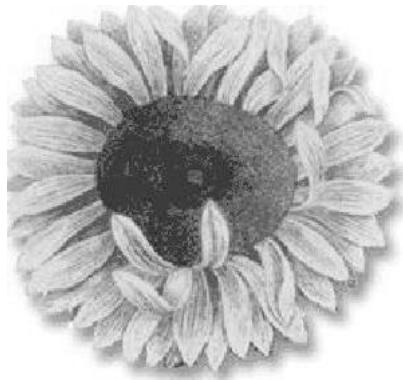
### Histogramas



Ruta Imagen: sunflower/image\_0077.jpg

Tamaño Color-> 18.6 KB

Tamaño Escala GRIS 15.3 KB



### Histogramas



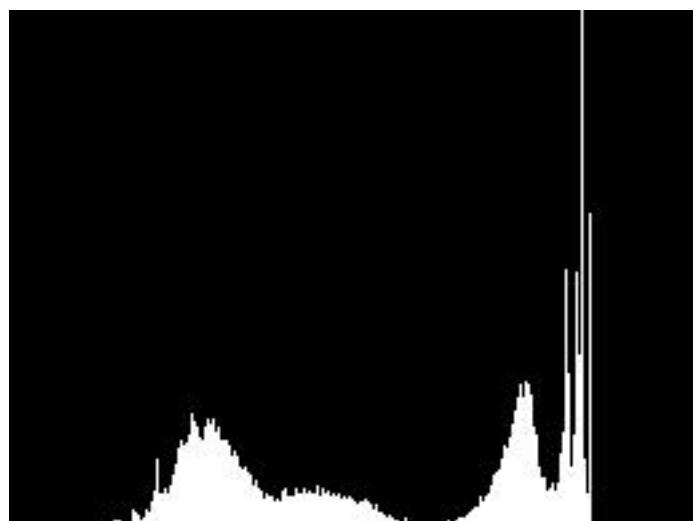
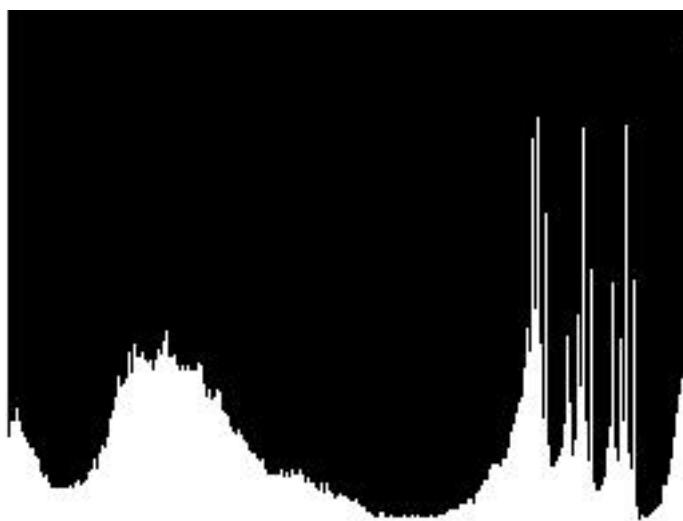
Ruta Imagen: sunflower/image\_0078.jpg

Tamaño Color-> 9.8 KB

Tamaño Escala GRIS 7.4 KB



### Histogramas



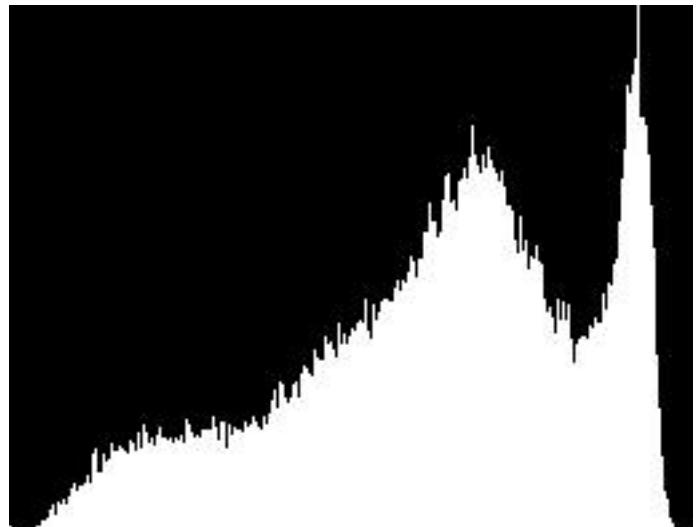
Ruta Imagen: sunflower/image\_0079.jpg

Tamaño Color-> 17.3 KB

Tamaño Escala GRIS 14.1 KB



### Histogramas



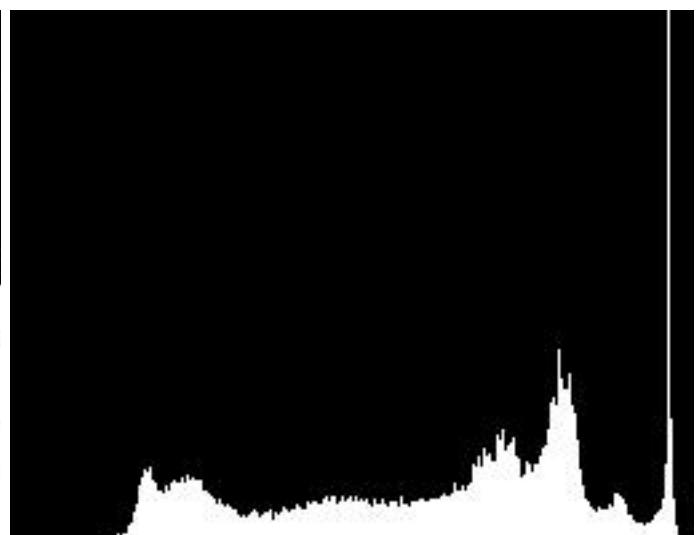
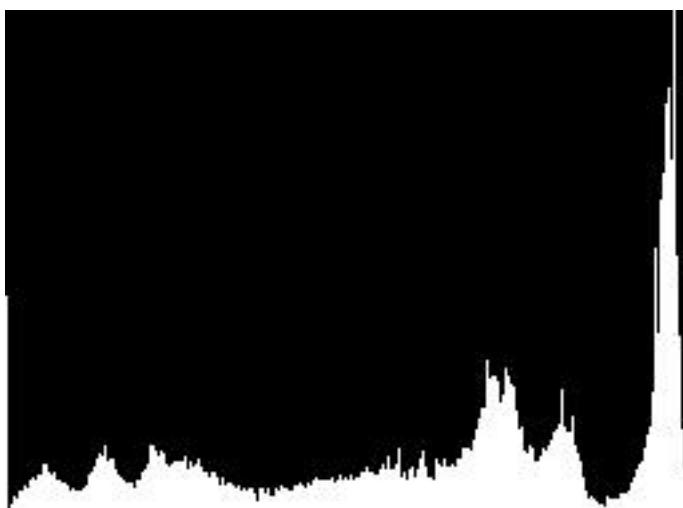
Ruta Imagen: sunflower/image\_0080.jpg

Tamaño Color-> 12.1 KB

Tamaño Escala GRIS 9.6 KB



### Histogramas



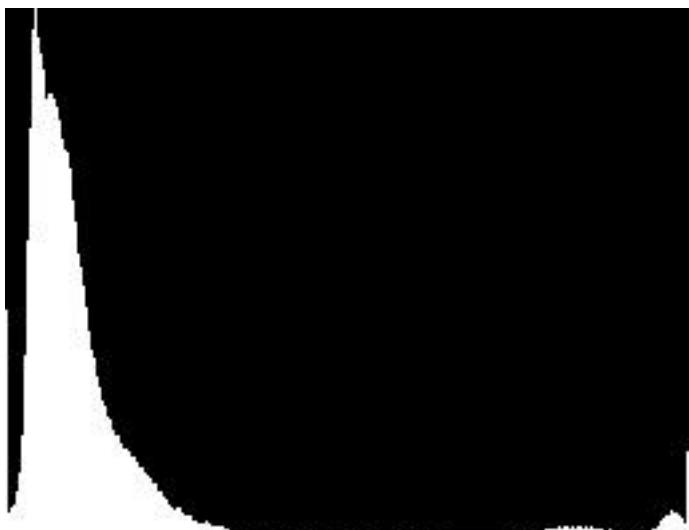
Ruta Imagen: sunflower/image\_0081.jpg

Tamaño Color-> 11.8 KB

Tamaño Escala GRIS 9.9 KB



### Histogramas



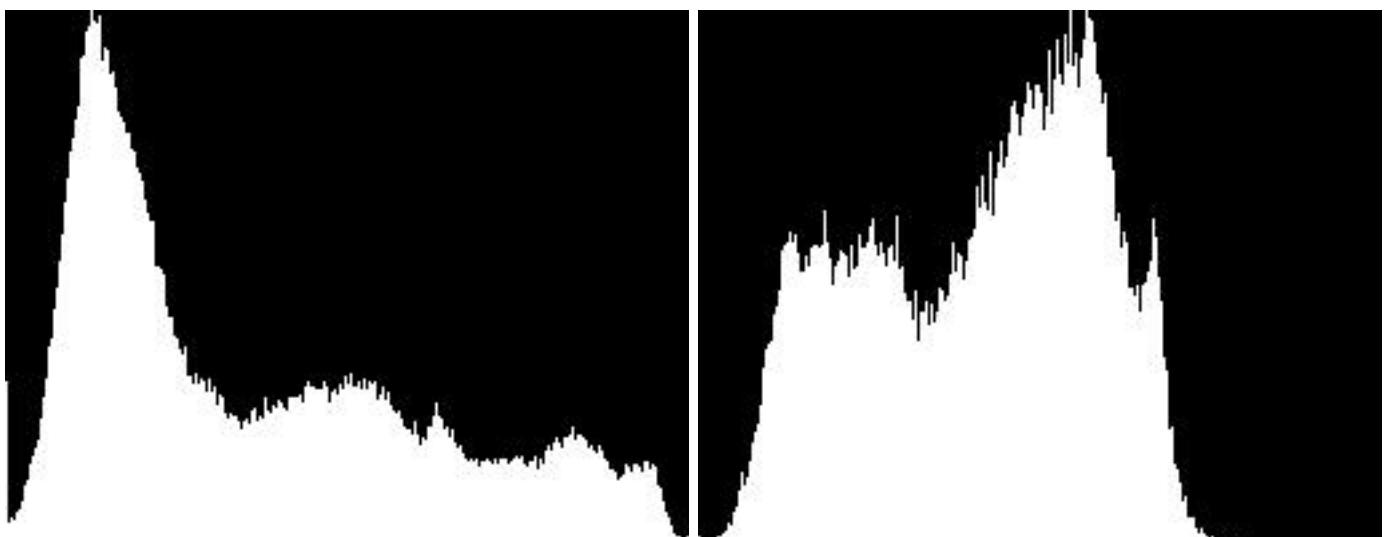
Ruta Imagen: sunflower/image\_0082.jpg

Tamaño Color-> 12.8 KB

Tamaño Escala GRIS 10.4 KB



### Histogramas



Ruta Imagen: sunflower/image\_0083.jpg

Tamaño Color-> 16.2 KB

Tamaño Escala GRIS 13.3 KB



### Histogramas



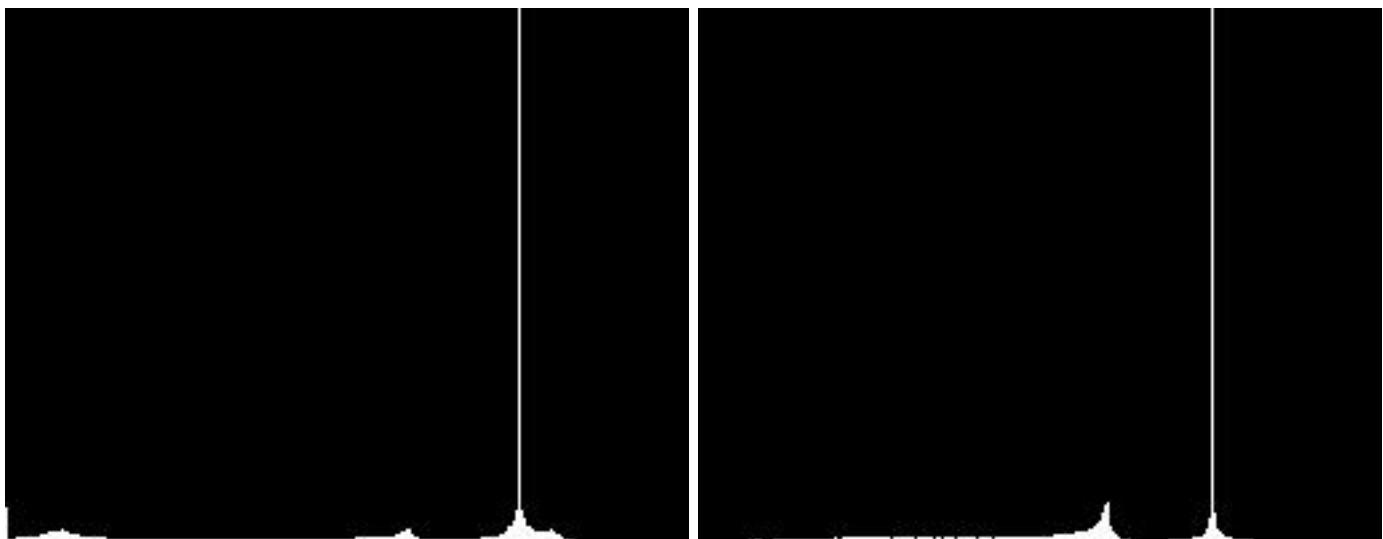
Ruta Imagen: sunflower/image\_0084.jpg

Tamaño Color-> 16.1 KB

Tamaño Escala GRIS 13.4 KB



### Histogramas



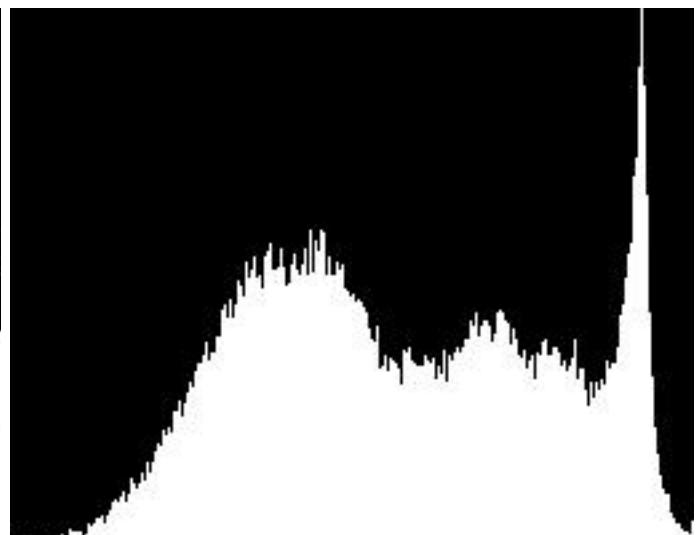
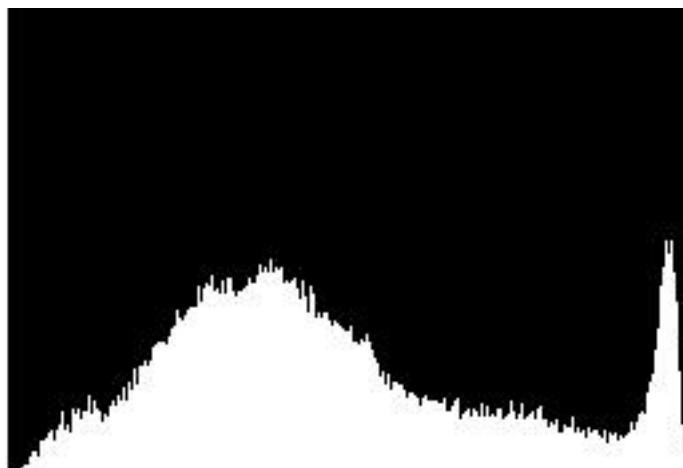
Ruta Imagen: sunflower/image\_0085.jpg

Tamaño Color-> 19.1 KB

Tamaño Escala GRIS 16.8 KB



### Histogramas



**Tiempo Empleado: 38.5642862320 segundos.**

**Tiempo Promedio: 0.4536974851 segundos.**

# **Inteligencia Artificial II**

## **Comparación de rendimiento en PDI MS Windows vs GNU/Linux**

**Autor:** Malki Yupanki

**Fecha:** 2021-01-11

## **Reporte de Resultados Linux**

**Universidad Politécnica Salesiana**

Ruta Imagen: sunflower/image\_0001.jpg

Tamaño Color-> 10.5 KB

Tamaño Escala GRIS 8.7 KB



### Histogramas



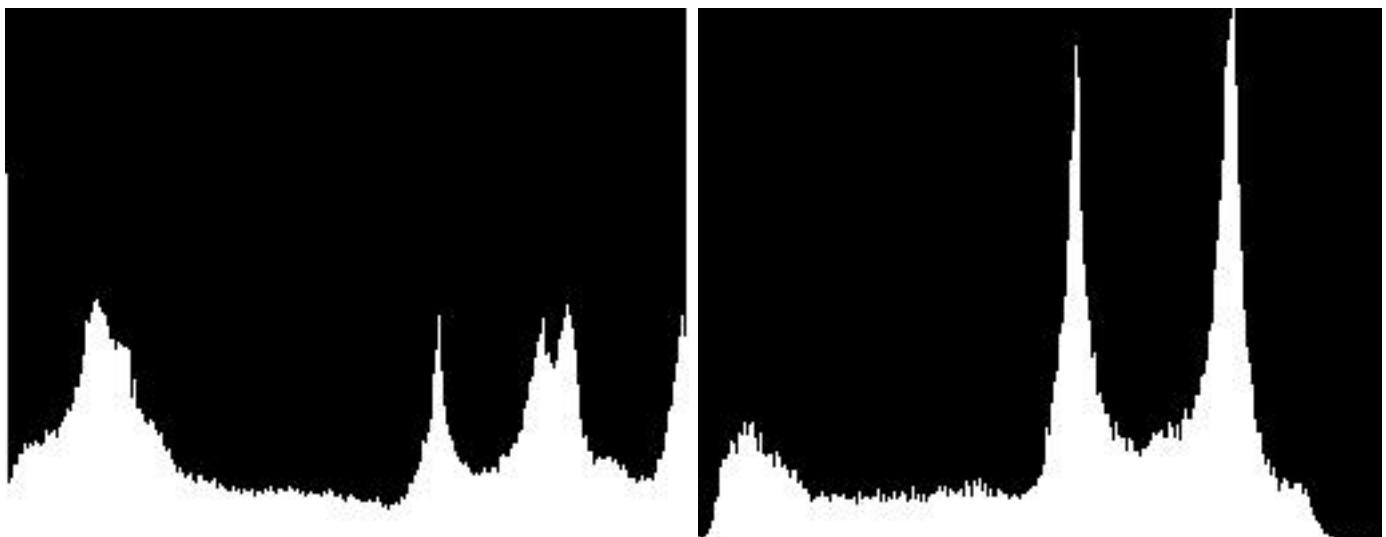
Ruta Imagen: sunflower/image\_0002.jpg

Tamaño Color-> 13.1 KB

Tamaño Escala GRIS 10.4 KB



### Histogramas



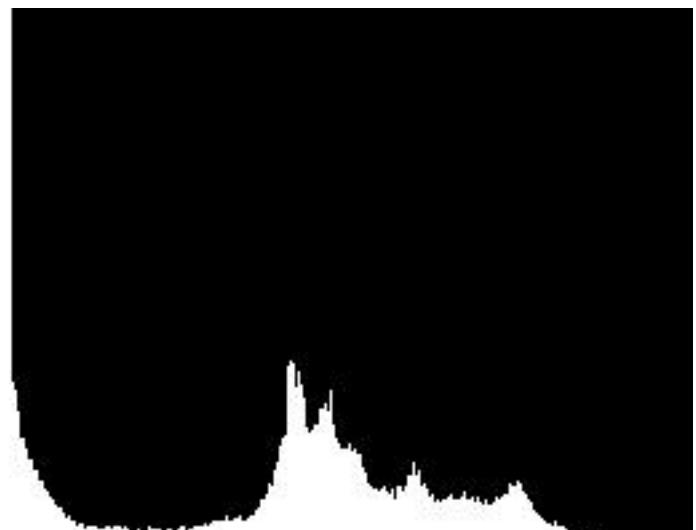
Ruta Imagen: sunflower/image\_0003.jpg

Tamaño Color-> 13.9 KB

Tamaño Escala GRIS 10.7 KB



### Histogramas



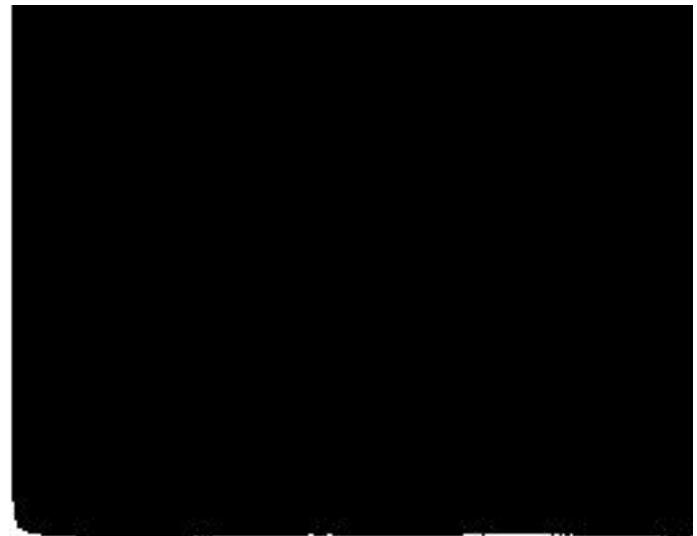
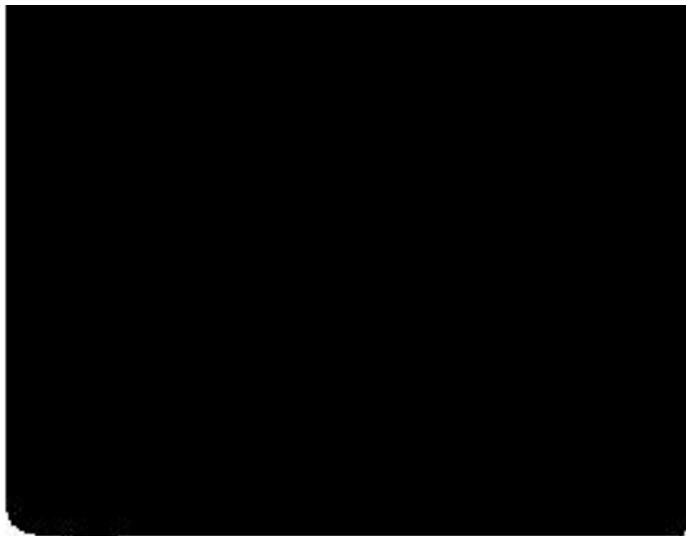
Ruta Imagen: sunflower/image\_0004.jpg

Tamaño Color-> 11.7 KB

Tamaño Escala GRIS 10.0 KB



### Histogramas



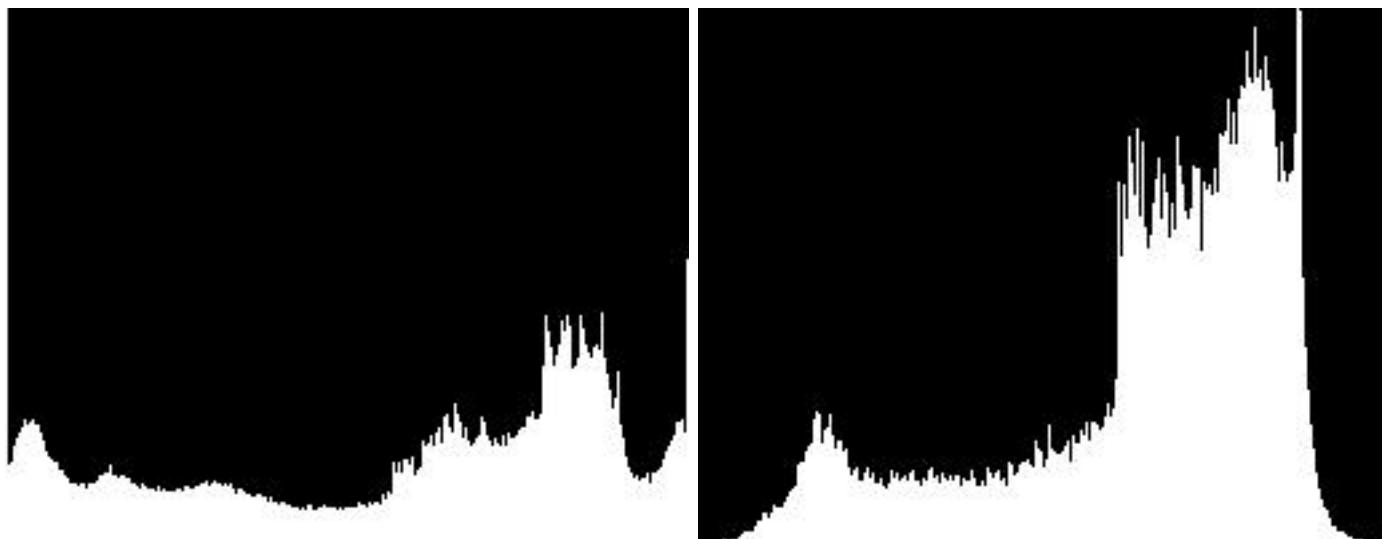
Ruta Imagen: sunflower/image\_0005.jpg

Tamaño Color-> 15.3 KB

Tamaño Escala GRIS 12.2 KB



### Histogramas



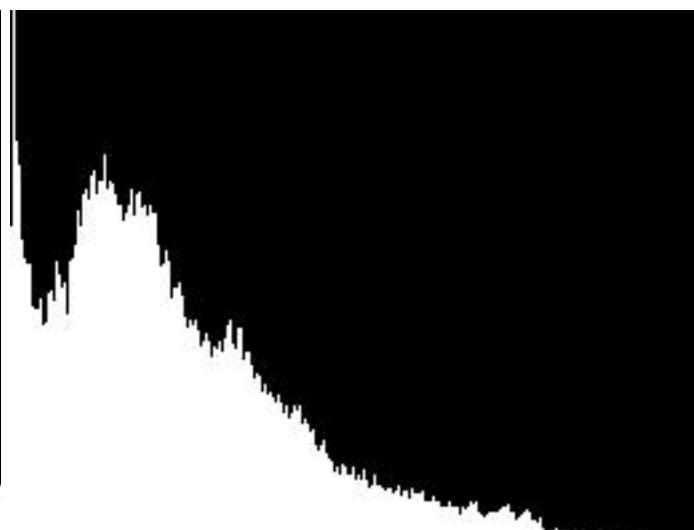
Ruta Imagen: sunflower/image\_0006.jpg

Tamaño Color-> 12.5 KB

Tamaño Escala GRIS 9.8 KB



### Histogramas



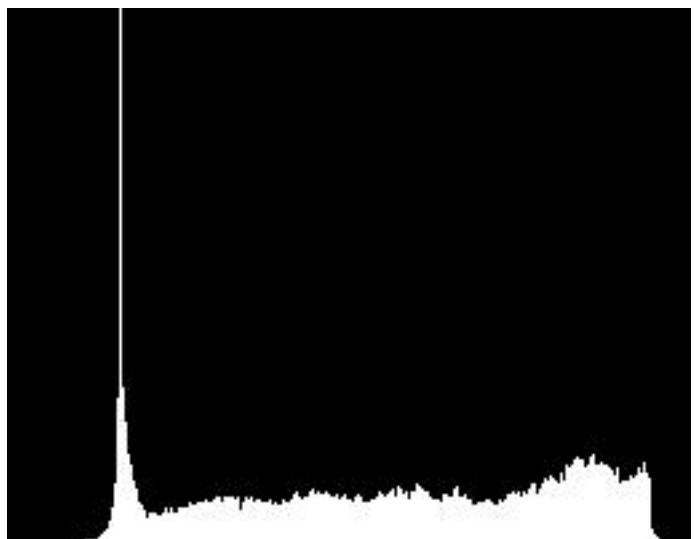
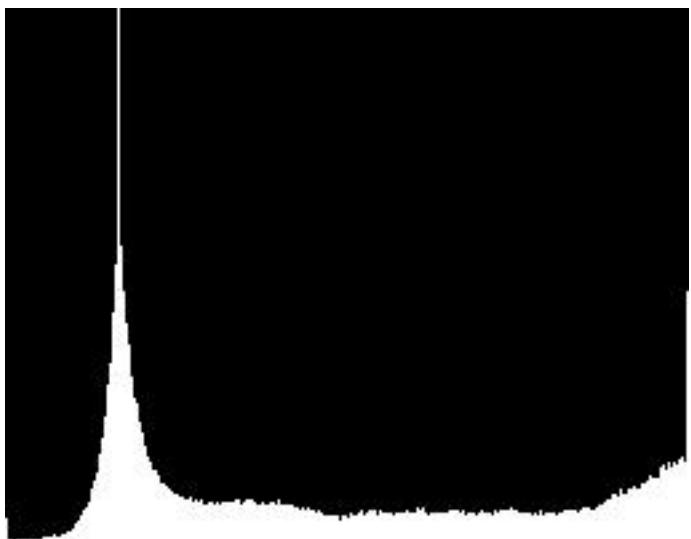
Ruta Imagen: sunflower/image\_0007.jpg

Tamaño Color-> 11.9 KB

Tamaño Escala GRIS 9.0 KB



### Histogramas



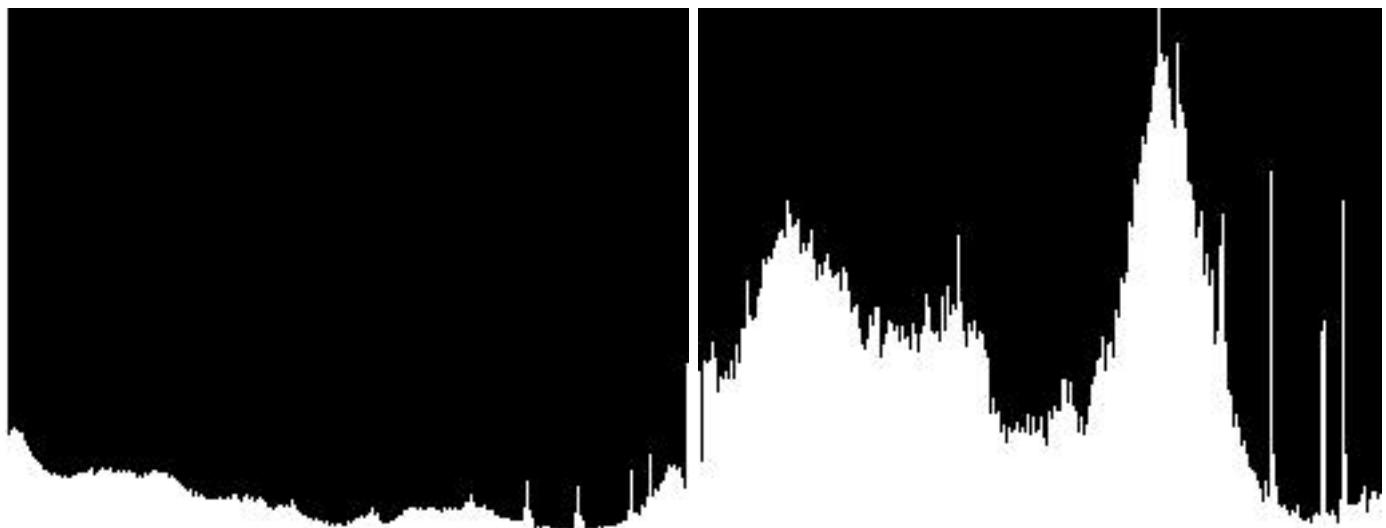
Ruta Imagen: sunflower/image\_0008.jpg

Tamaño Color-> 15.5 KB

Tamaño Escala GRIS 12.7 KB



### Histogramas



Ruta Imagen: sunflower/image\_0009.jpg

Tamaño Color-> 24.0 KB

Tamaño Escala GRIS 21.2 KB



### Histogramas



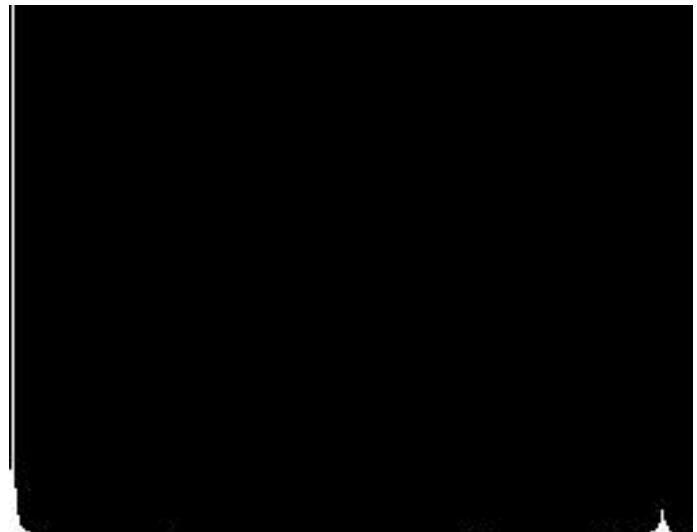
Ruta Imagen: sunflower/image\_0010.jpg

Tamaño Color-> 14.8 KB

Tamaño Escala GRIS 12.8 KB



### Histogramas



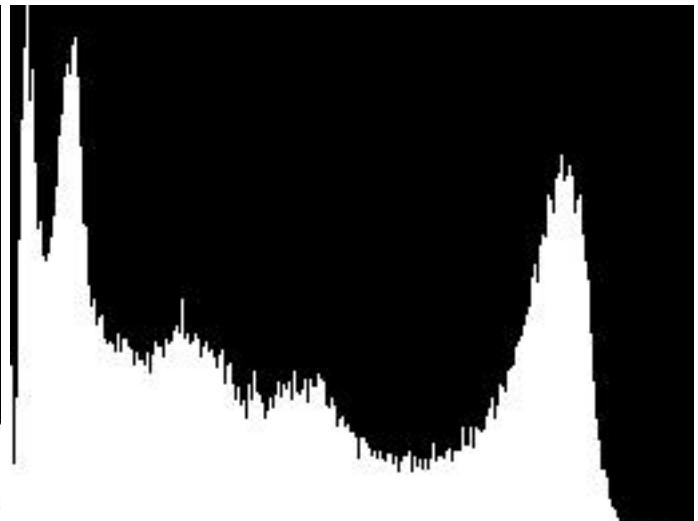
Ruta Imagen: sunflower/image\_0011.jpg

Tamaño Color-> 19.6 KB

Tamaño Escala GRIS 16.6 KB



### Histogramas



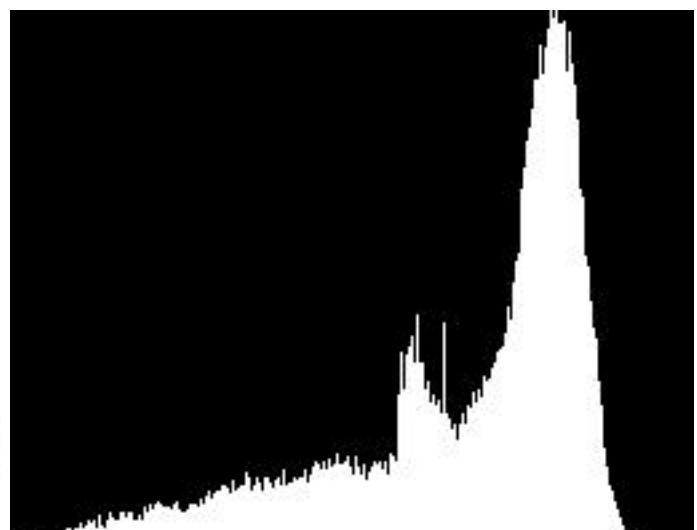
Ruta Imagen: sunflower/image\_0012.jpg

Tamaño Color-> 14.6 KB

Tamaño Escala GRIS 11.8 KB



### Histogramas



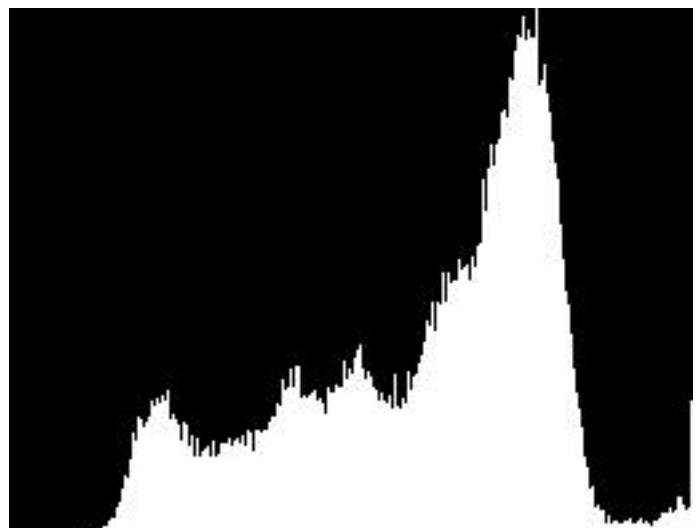
Ruta Imagen: sunflower/image\_0013.jpg

Tamaño Color-> 21.3 KB

Tamaño Escala GRIS 17.9 KB



### Histogramas



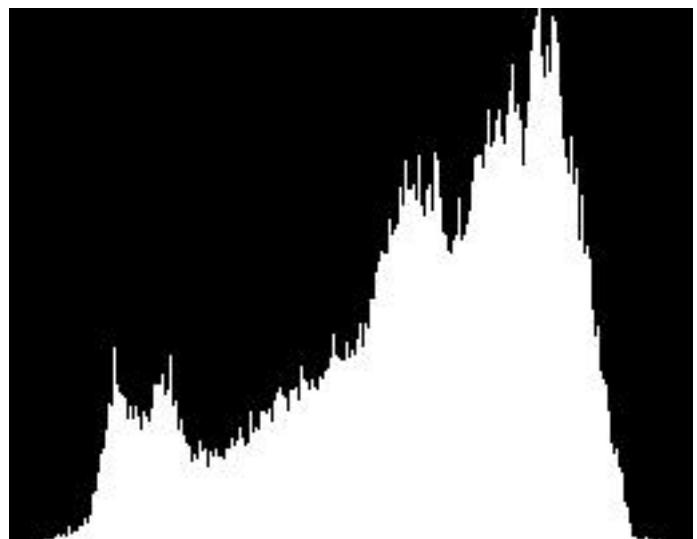
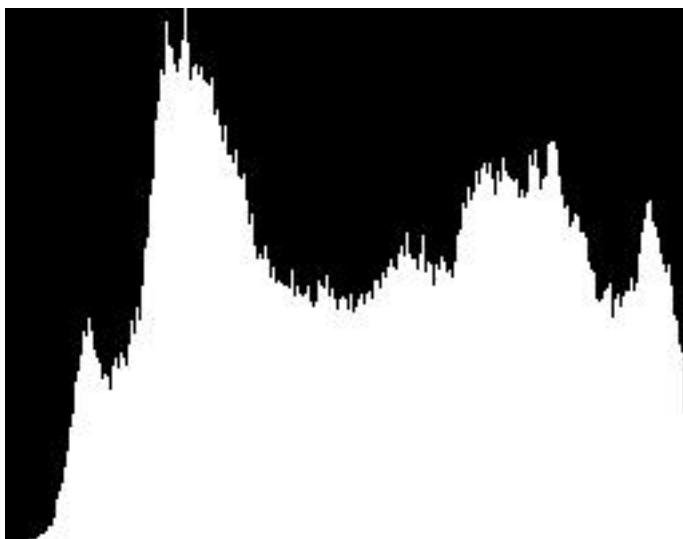
Ruta Imagen: sunflower/image\_0014.jpg

Tamaño Color-> 13.5 KB

Tamaño Escala GRIS 10.8 KB



### Histogramas



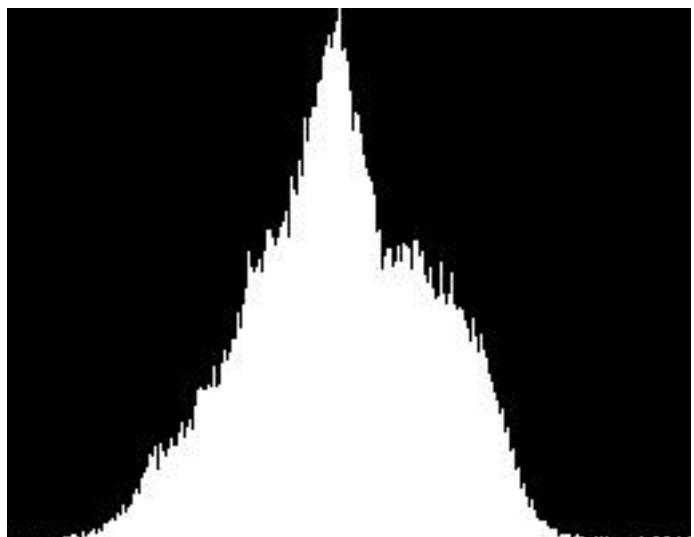
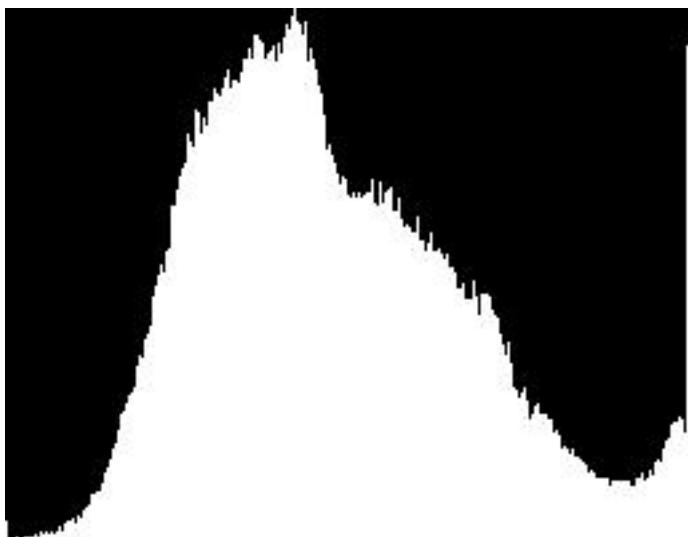
Ruta Imagen: sunflower/image\_0015.jpg

Tamaño Color-> 17.3 KB

Tamaño Escala GRIS 14.3 KB



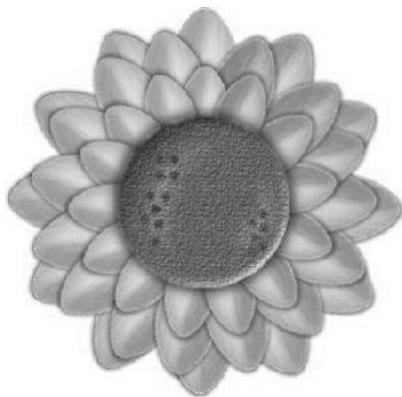
### Histogramas



Ruta Imagen: sunflower/image\_0016.jpg

Tamaño Color-> 14.3 KB

Tamaño Escala GRIS 11.8 KB



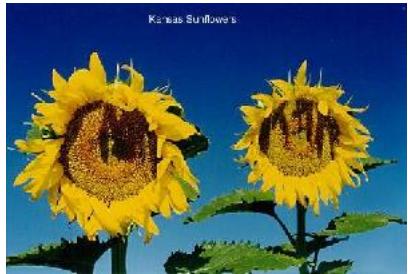
### Histogramas



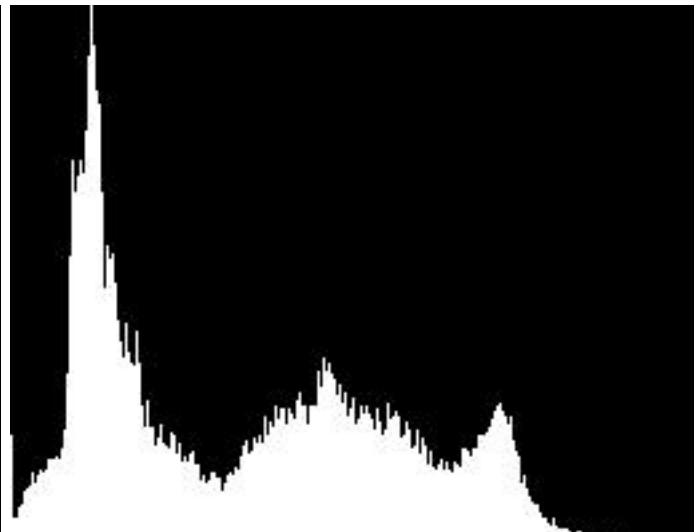
Ruta Imagen: sunflower/image\_0017.jpg

Tamaño Color-> 16.2 KB

Tamaño Escala GRIS 13.1 KB



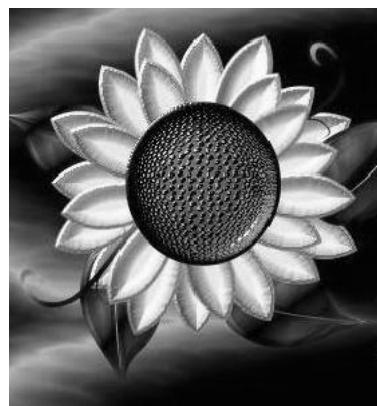
### Histogramas



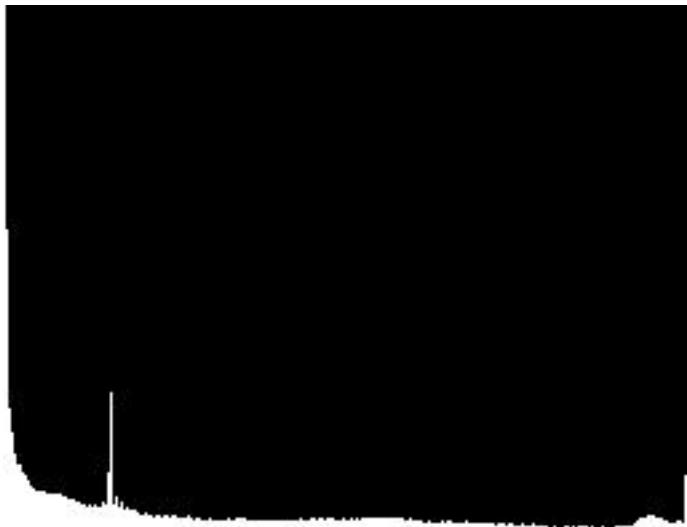
Ruta Imagen: sunflower/image\_0018.jpg

Tamaño Color-> 19.5 KB

Tamaño Escala GRIS 16.3 KB



### Histogramas



Ruta Imagen: sunflower/image\_0019.jpg

Tamaño Color-> 16.5 KB

Tamaño Escala GRIS 14.3 KB



### Histogramas



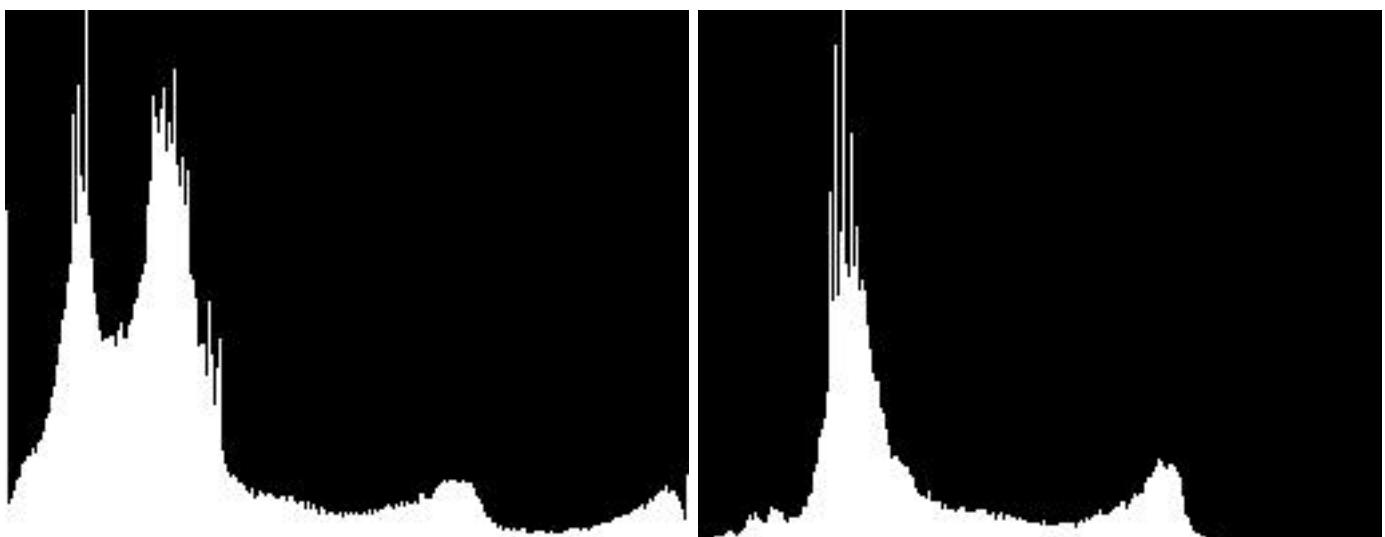
Ruta Imagen: sunflower/image\_0020.jpg

Tamaño Color-> 11.5 KB

Tamaño Escala GRIS 8.9 KB



### Histogramas



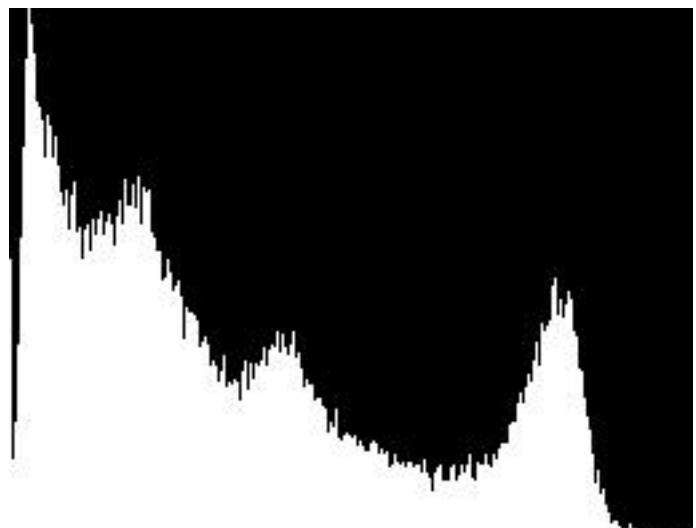
Ruta Imagen: sunflower/image\_0021.jpg

Tamaño Color-> 20.7 KB

Tamaño Escala GRIS 18.1 KB



### Histogramas



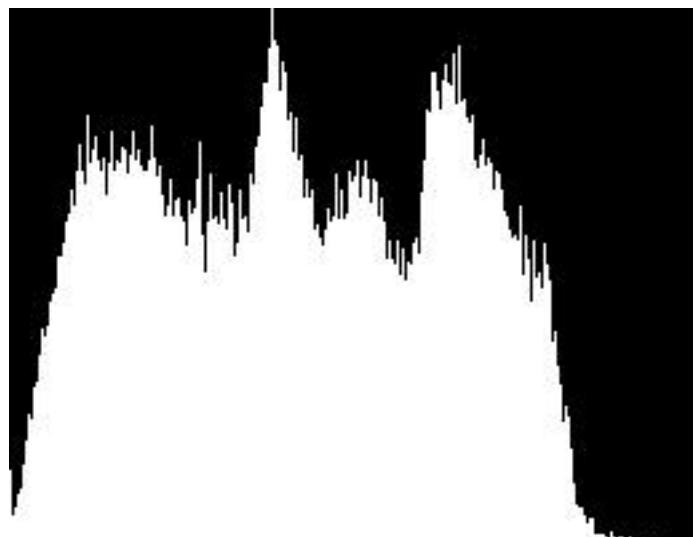
Ruta Imagen: sunflower/image\_0022.jpg

Tamaño Color-> 17.2 KB

Tamaño Escala GRIS 14.5 KB



### Histogramas



Ruta Imagen: sunflower/image\_0023.jpg

Tamaño Color-> 13.8 KB

Tamaño Escala GRIS 11.5 KB



### Histogramas



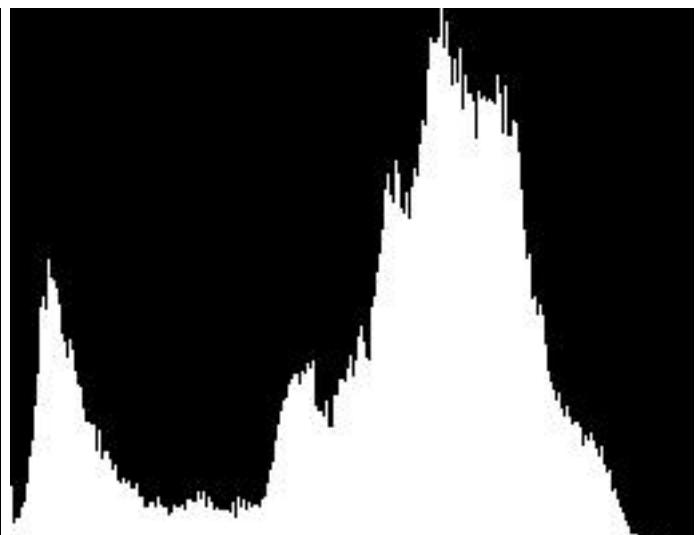
Ruta Imagen: sunflower/image\_0024.jpg

Tamaño Color-> 14.4 KB

Tamaño Escala GRIS 11.5 KB



### Histogramas



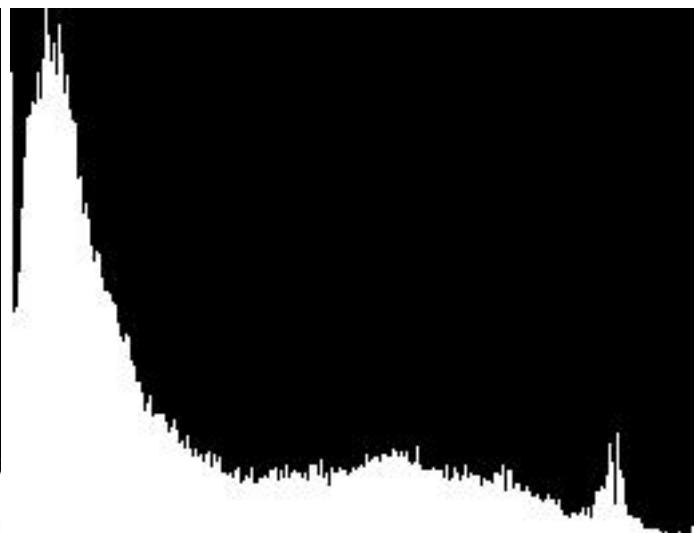
Ruta Imagen: sunflower/image\_0025.jpg

Tamaño Color-> 20.2 KB

Tamaño Escala GRIS 17.5 KB



### Histogramas



Ruta Imagen: sunflower/image\_0026.jpg

Tamaño Color-> 18.5 KB

Tamaño Escala GRIS 16.2 KB



### Histogramas



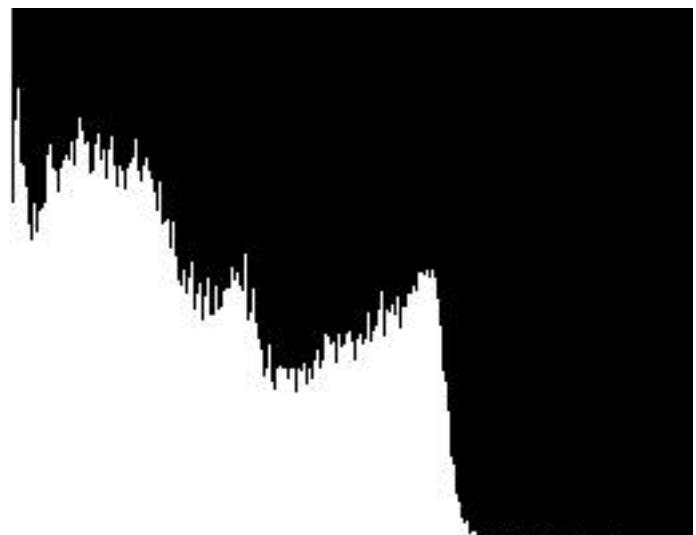
Ruta Imagen: sunflower/image\_0027.jpg

Tamaño Color-> 13.9 KB

Tamaño Escala GRIS 11.1 KB



### Histogramas



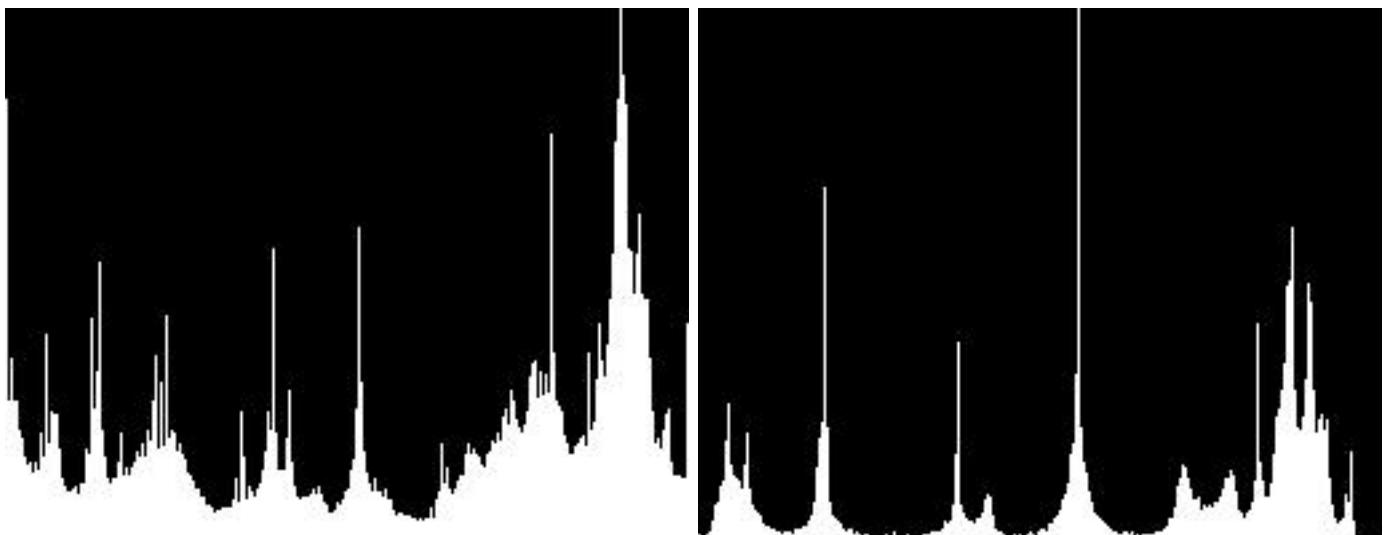
Ruta Imagen: sunflower/image\_0028.jpg

Tamaño Color-> 9.8 KB

Tamaño Escala GRIS 7.6 KB



### Histogramas



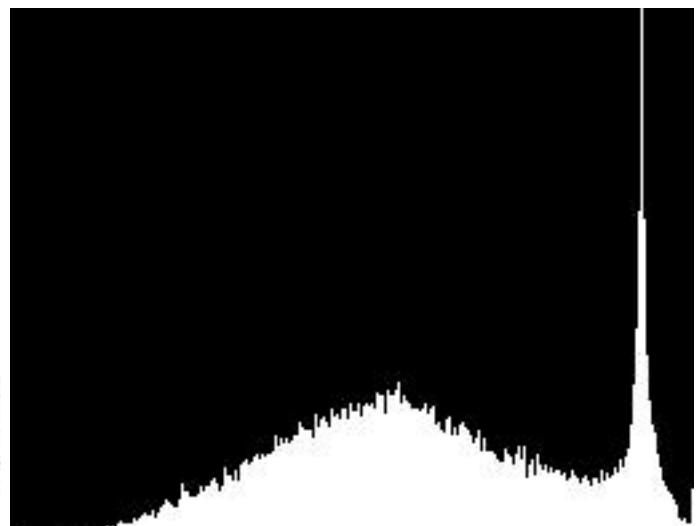
Ruta Imagen: sunflower/image\_0029.jpg

Tamaño Color-> 21.4 KB

Tamaño Escala GRIS 18.4 KB



### Histogramas



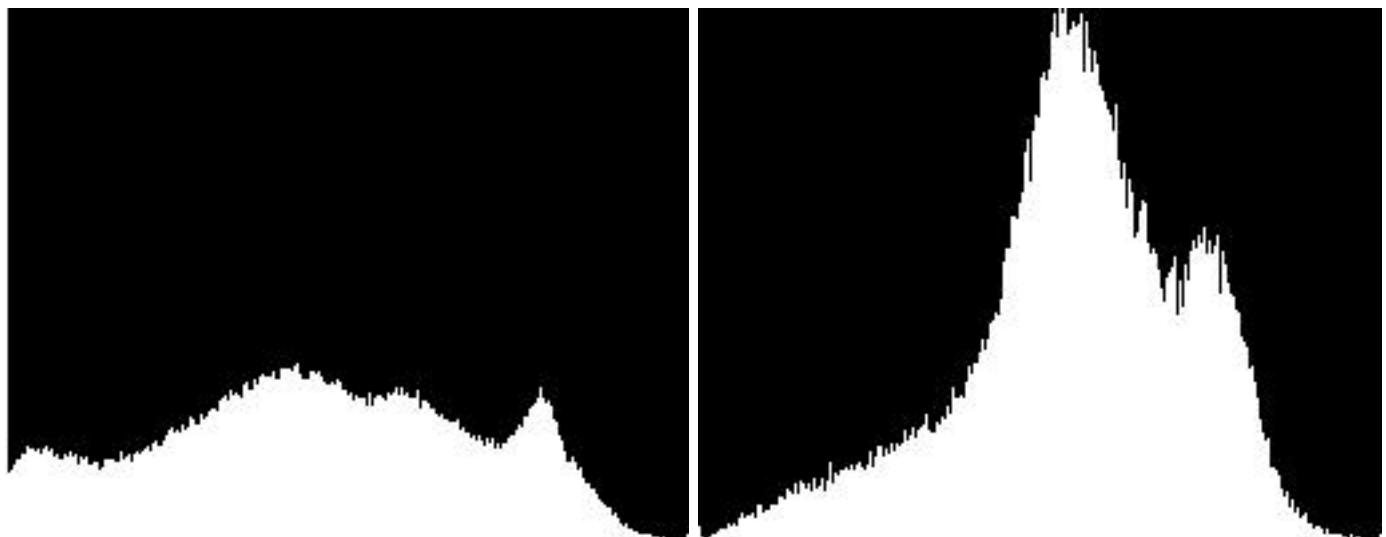
Ruta Imagen: sunflower/image\_0030.jpg

Tamaño Color-> 19.5 KB

Tamaño Escala GRIS 17.0 KB



### Histogramas



Ruta Imagen: sunflower/image\_0031.jpg

Tamaño Color-> 20.7 KB

Tamaño Escala GRIS 17.3 KB



### Histogramas



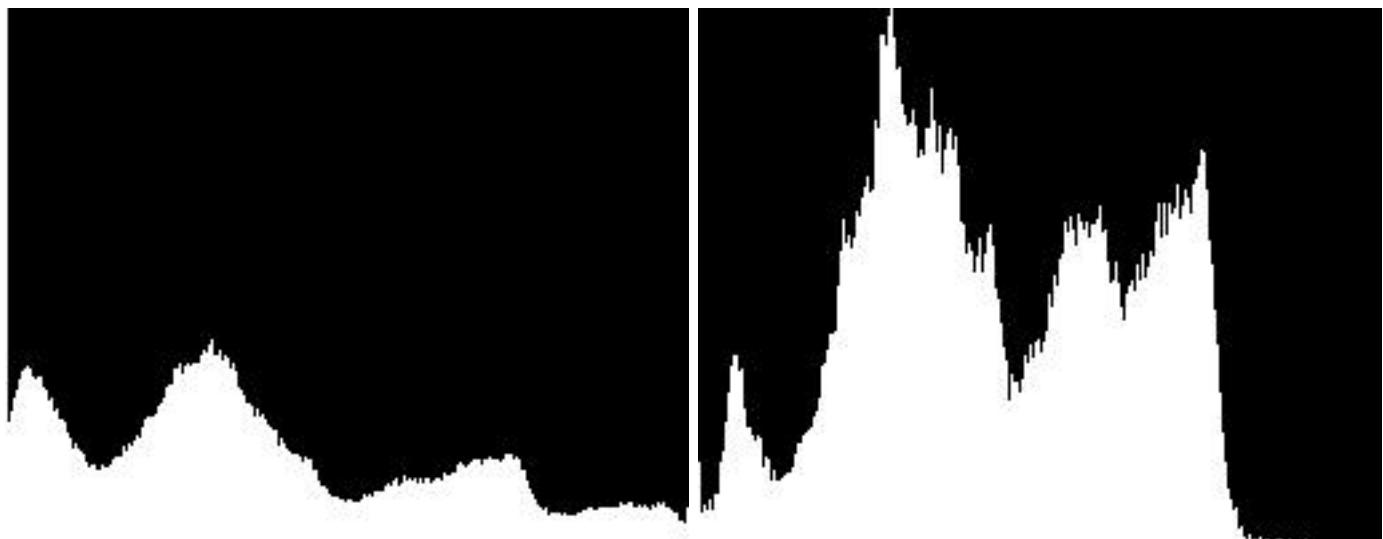
Ruta Imagen: sunflower/image\_0032.jpg

Tamaño Color-> 14.2 KB

Tamaño Escala GRIS 11.2 KB



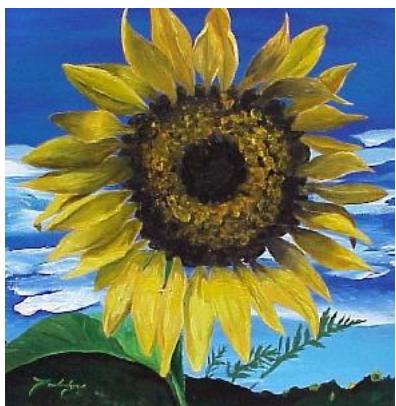
### Histogramas



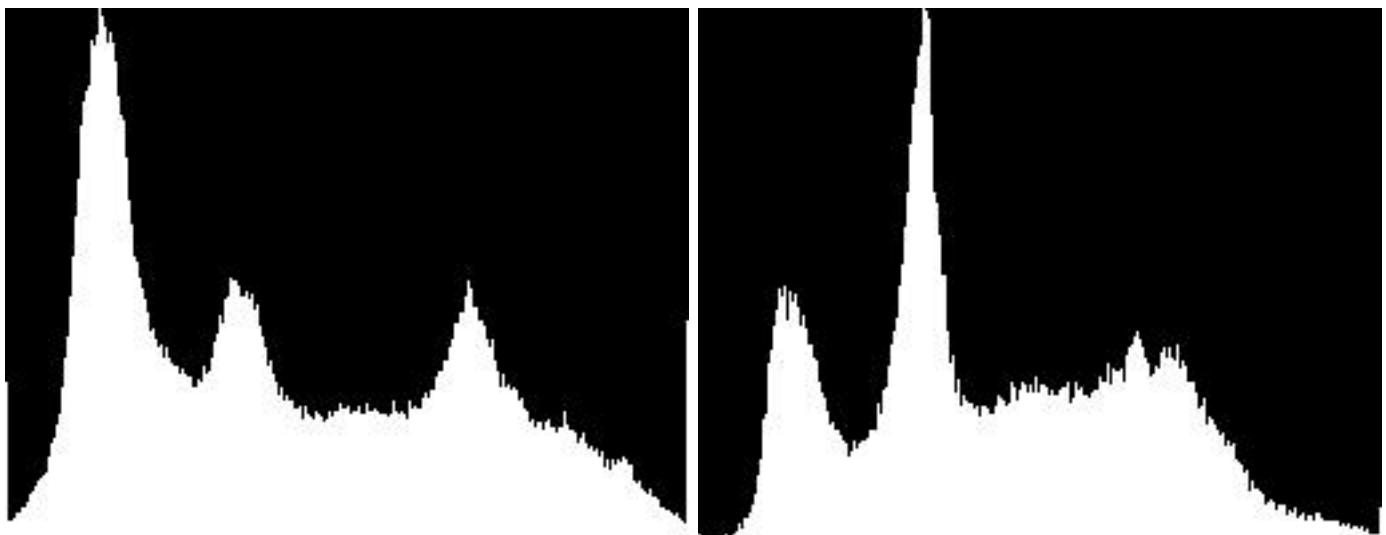
Ruta Imagen: sunflower/image\_0033.jpg

Tamaño Color-> 23.5 KB

Tamaño Escala GRIS 19.3 KB



### Histogramas



Ruta Imagen: sunflower/image\_0034.jpg

Tamaño Color-> 12.6 KB

Tamaño Escala GRIS 10.2 KB



### Histogramas



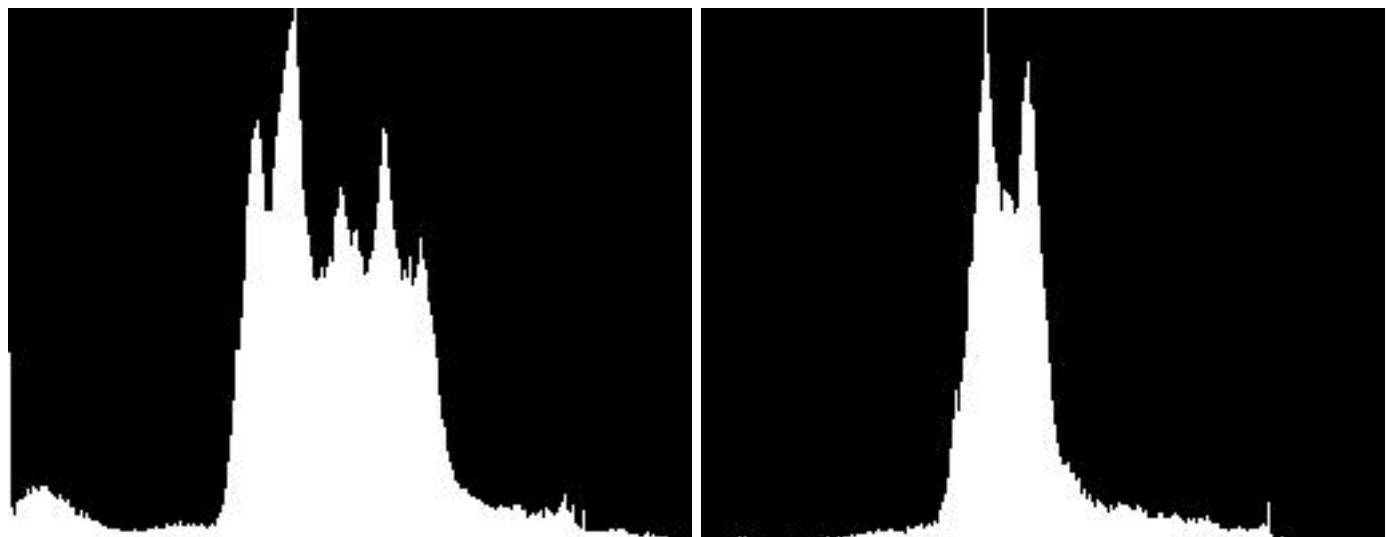
Ruta Imagen: sunflower/image\_0035.jpg

Tamaño Color-> 8.3 KB

Tamaño Escala GRIS 6.4 KB



### Histogramas



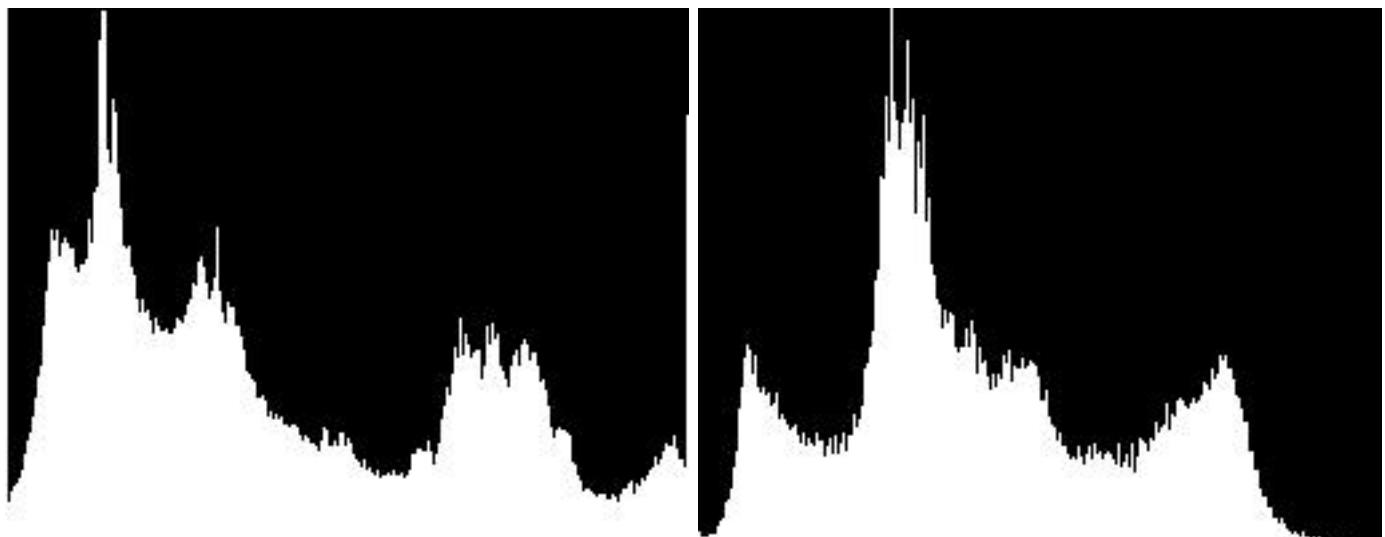
Ruta Imagen: sunflower/image\_0036.jpg

Tamaño Color-> 14.9 KB

Tamaño Escala GRIS 12.3 KB



### Histogramas



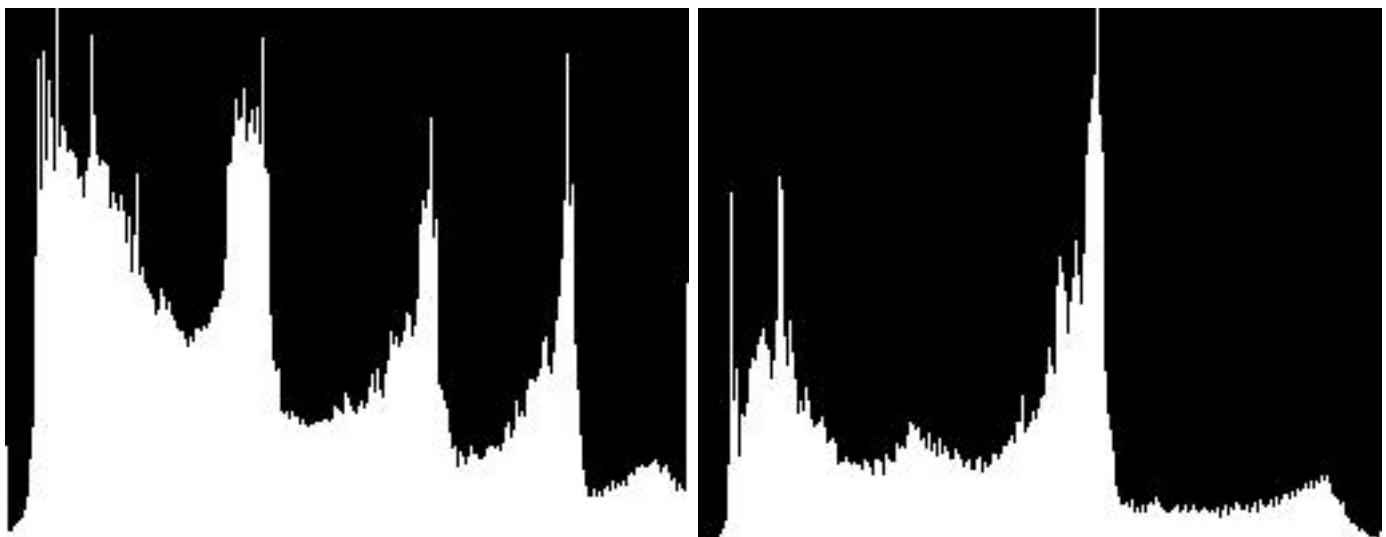
Ruta Imagen: sunflower/image\_0037.jpg

Tamaño Color-> 11.4 KB

Tamaño Escala GRIS 9.4 KB



### Histogramas



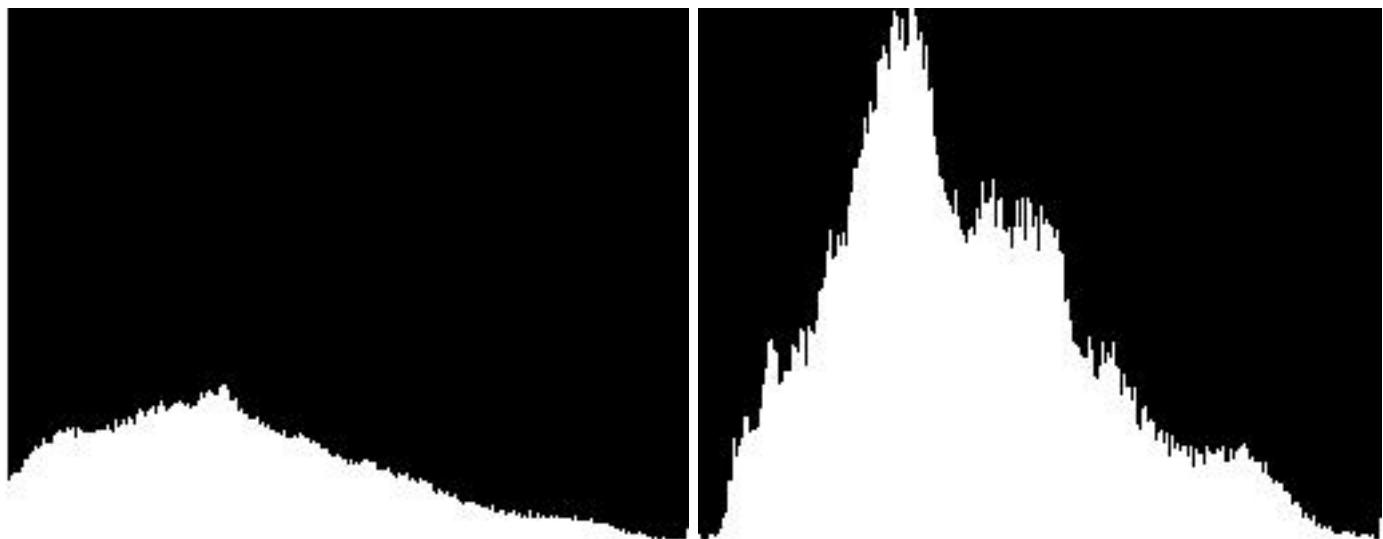
Ruta Imagen: sunflower/image\_0038.jpg

Tamaño Color-> 17.4 KB

Tamaño Escala GRIS 14.9 KB



### Histogramas



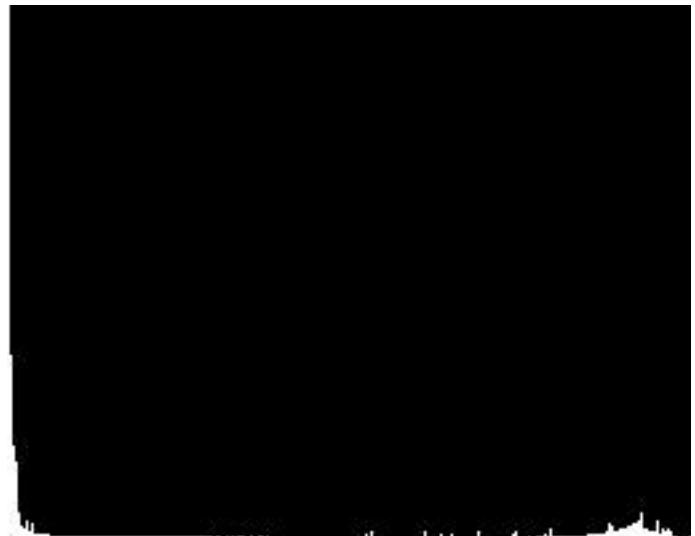
Ruta Imagen: sunflower/image\_0039.jpg

Tamaño Color-> 12.1 KB

Tamaño Escala GRIS 9.4 KB



### Histogramas



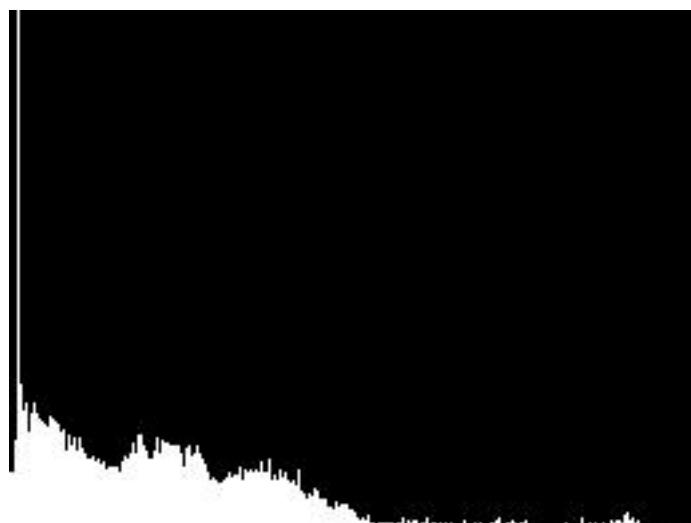
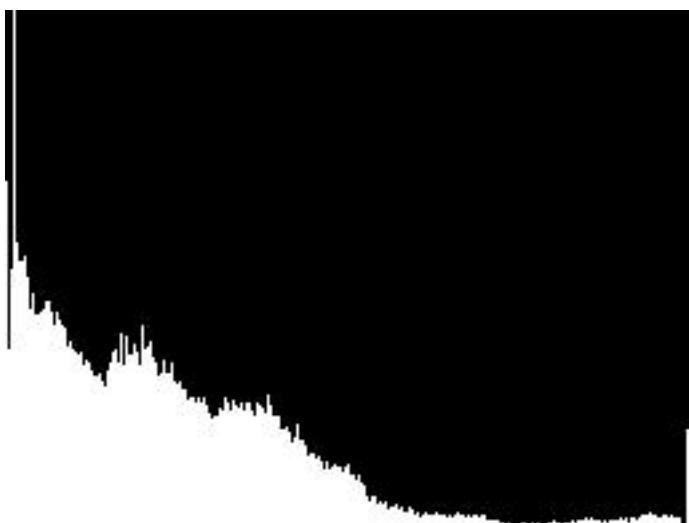
Ruta Imagen: sunflower/image\_0040.jpg

Tamaño Color-> 12.6 KB

Tamaño Escala GRIS 10.5 KB



### Histogramas



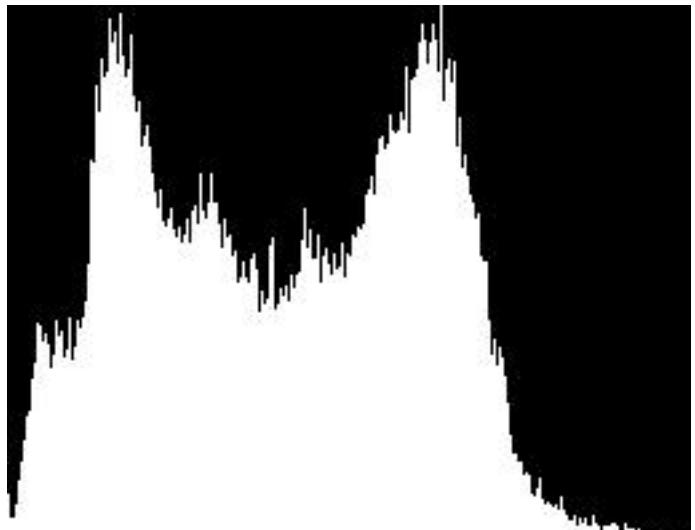
Ruta Imagen: sunflower/image\_0041.jpg

Tamaño Color-> 13.5 KB

Tamaño Escala GRIS 11.1 KB



### Histogramas



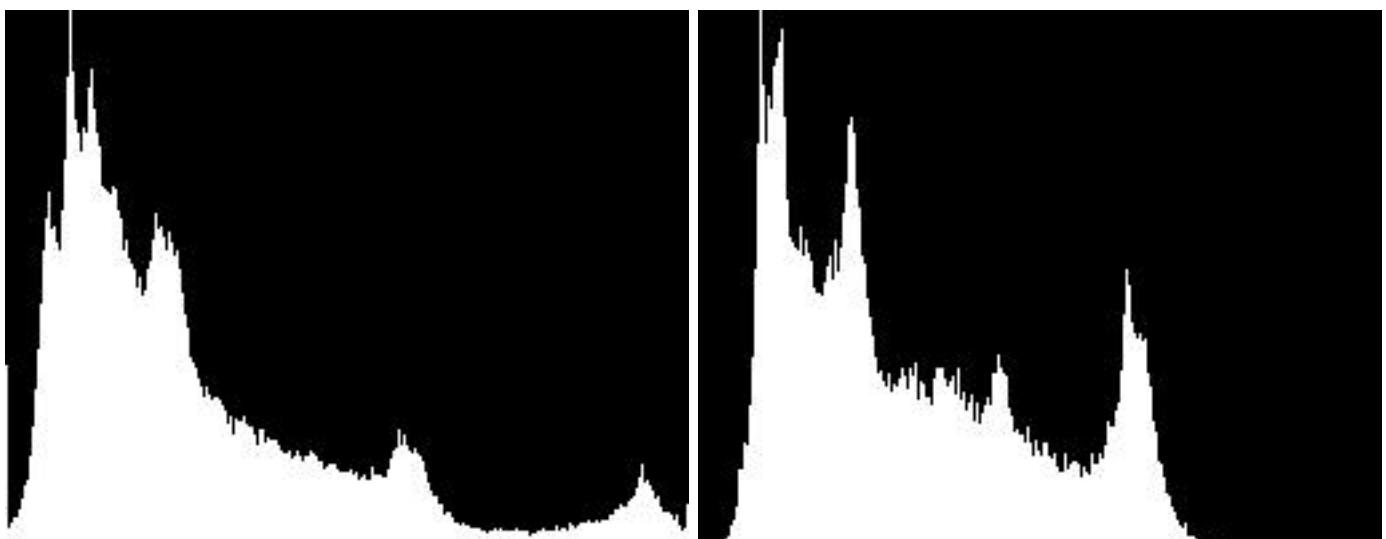
Ruta Imagen: sunflower/image\_0042.jpg

Tamaño Color-> 11.0 KB

Tamaño Escala GRIS 8.9 KB



### Histogramas



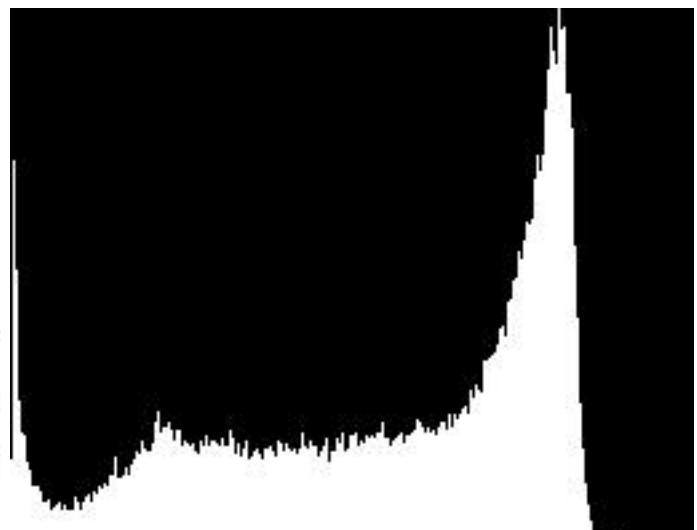
Ruta Imagen: sunflower/image\_0043.jpg

Tamaño Color-> 19.2 KB

Tamaño Escala GRIS 15.9 KB



### Histogramas



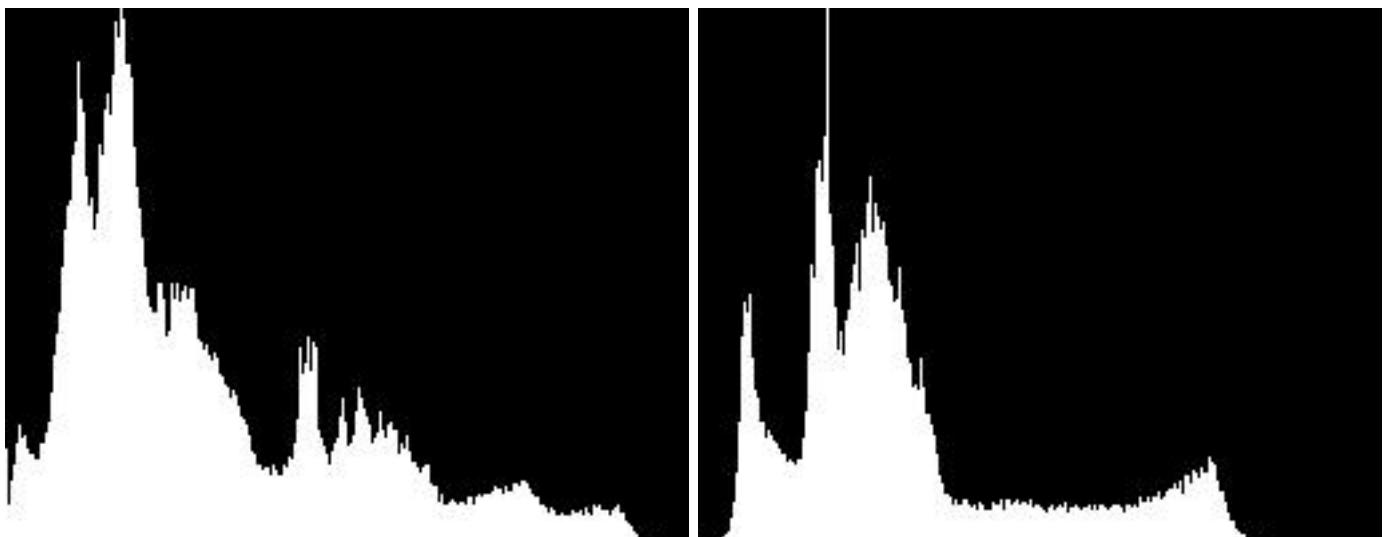
Ruta Imagen: sunflower/image\_0044.jpg

Tamaño Color-> 11.5 KB

Tamaño Escala GRIS 9.2 KB



### Histogramas



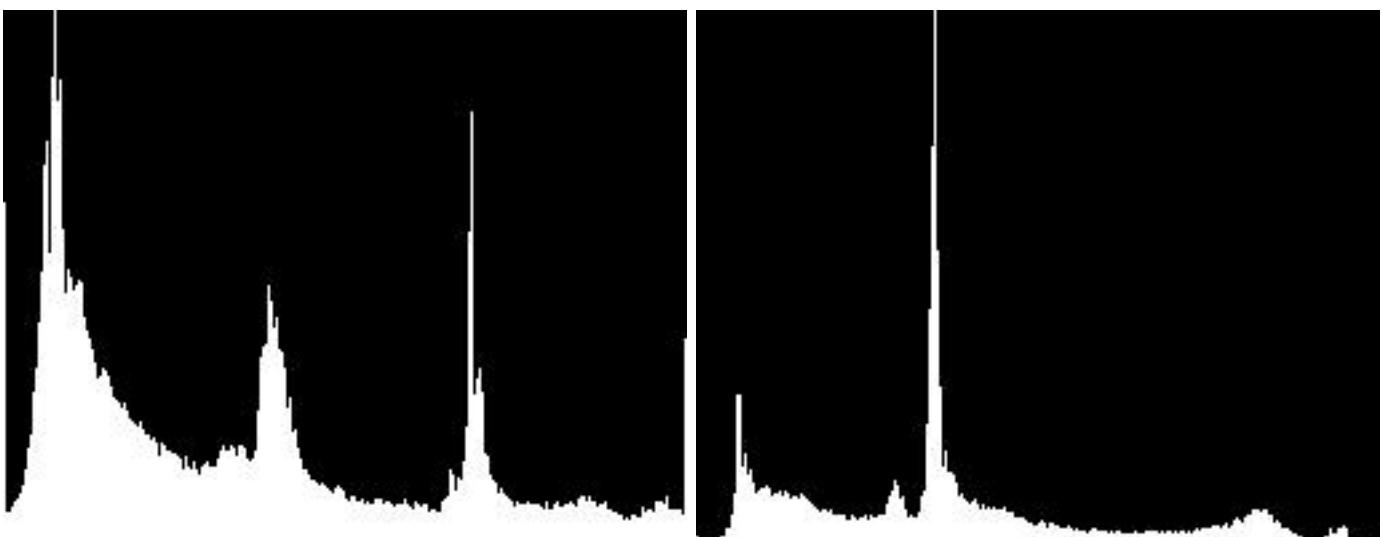
Ruta Imagen: sunflower/image\_0045.jpg

Tamaño Color-> 17.8 KB

Tamaño Escala GRIS 14.9 KB



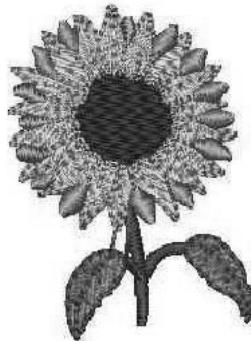
### Histogramas



Ruta Imagen: sunflower/image\_0046.jpg

Tamaño Color-> 14.8 KB

Tamaño Escala GRIS 12.9 KB



### Histogramas



Ruta Imagen: sunflower/image\_0047.jpg

Tamaño Color-> 15.3 KB

Tamaño Escala GRIS 12.5 KB



### Histogramas



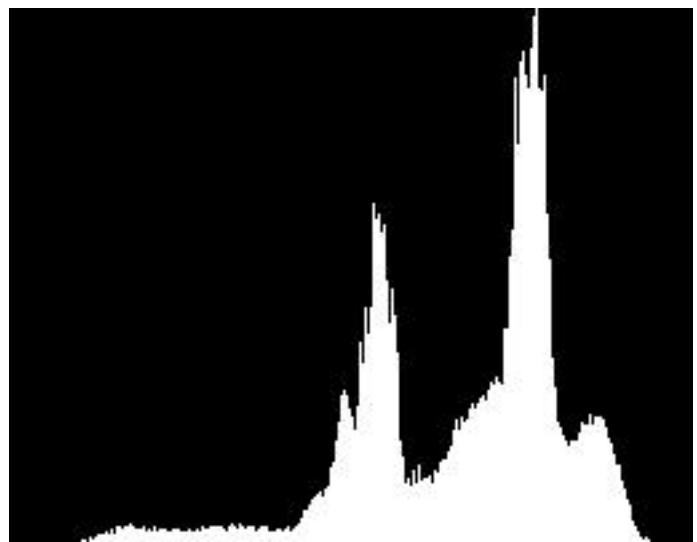
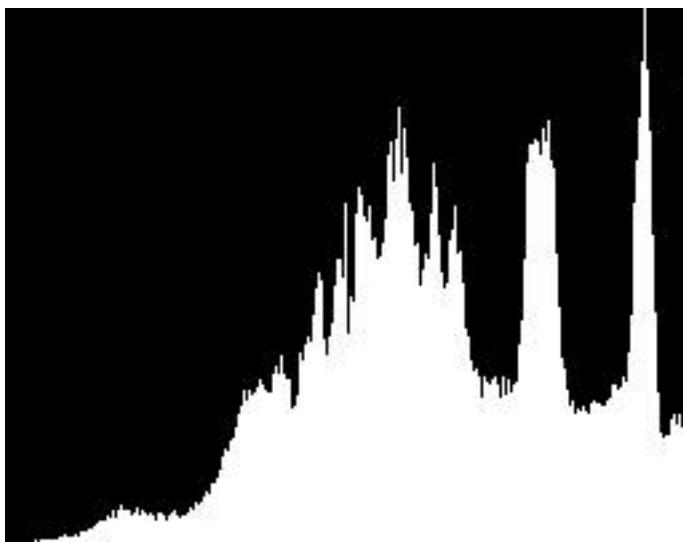
Ruta Imagen: sunflower/image\_0048.jpg

Tamaño Color-> 10.2 KB

Tamaño Escala GRIS 7.8 KB



### Histogramas



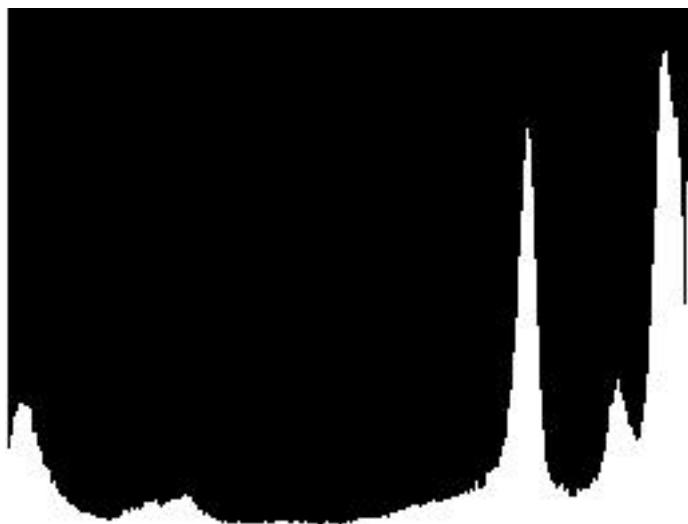
Ruta Imagen: sunflower/image\_0049.jpg

Tamaño Color-> 14.9 KB

Tamaño Escala GRIS 12.2 KB



### Histogramas



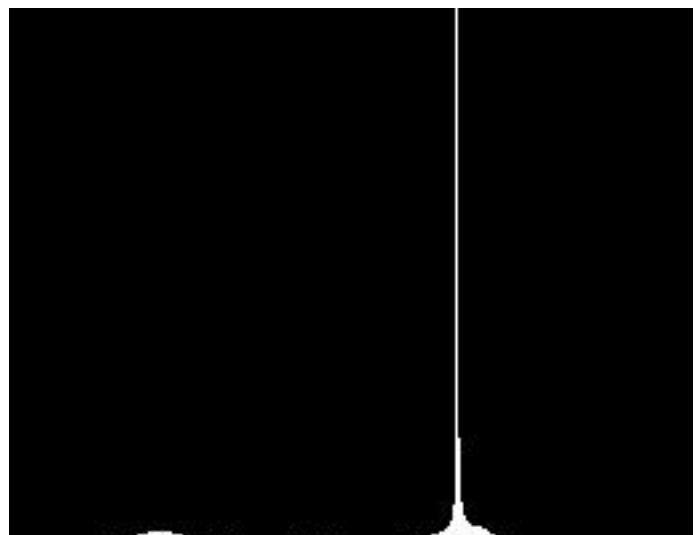
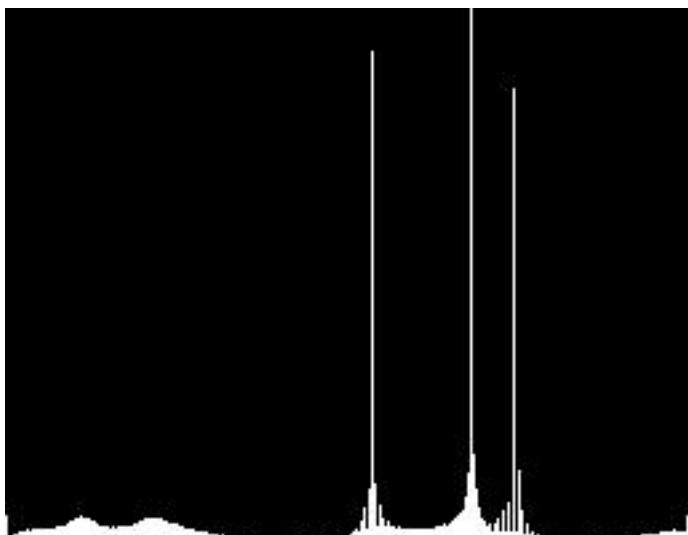
Ruta Imagen: sunflower/image\_0050.jpg

Tamaño Color-> 8.3 KB

Tamaño Escala GRIS 6.1 KB



### Histogramas



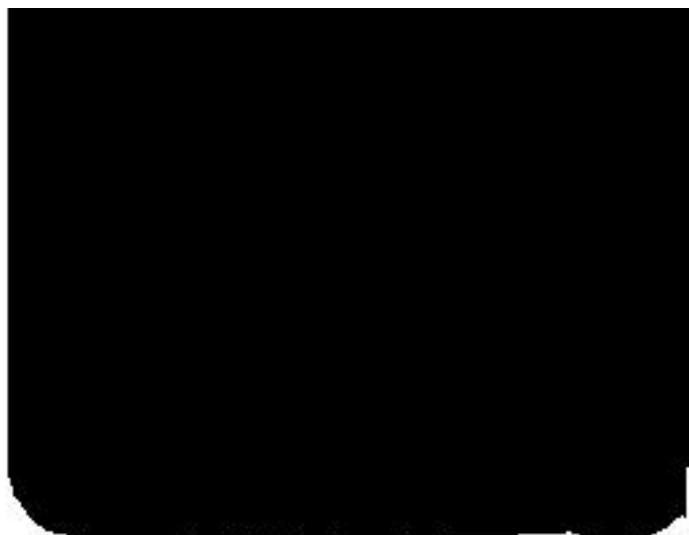
Ruta Imagen: sunflower/image\_0051.jpg

Tamaño Color-> 14.4 KB

Tamaño Escala GRIS 11.6 KB



### Histogramas



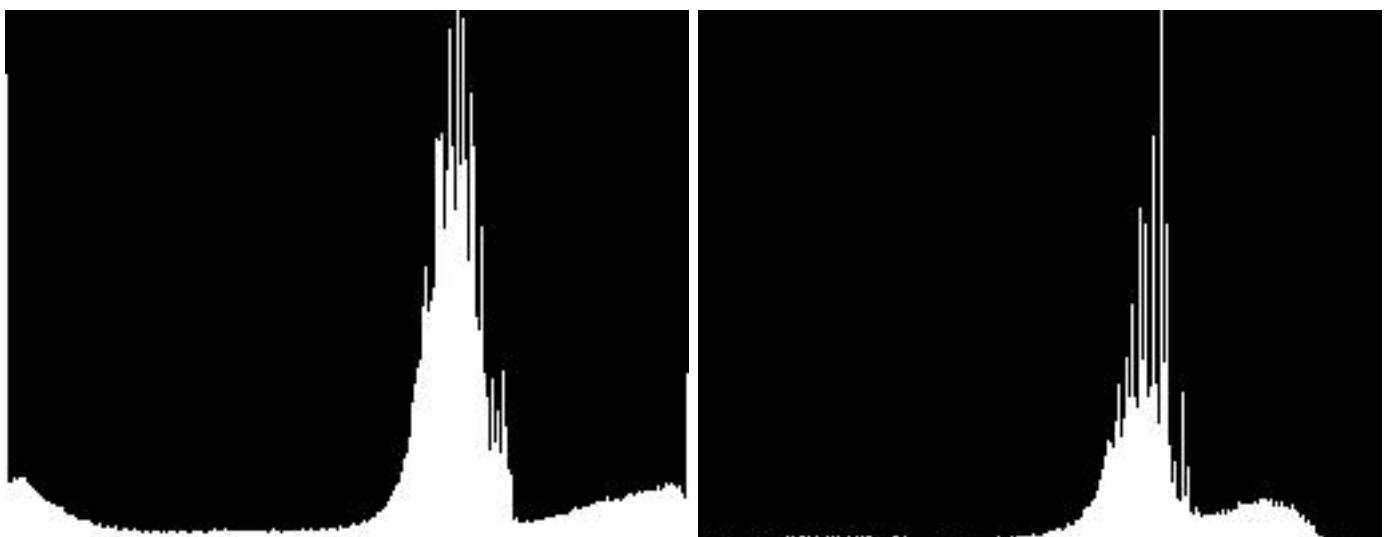
Ruta Imagen: sunflower/image\_0052.jpg

Tamaño Color-> 11.6 KB

Tamaño Escala GRIS 9.2 KB



### Histogramas



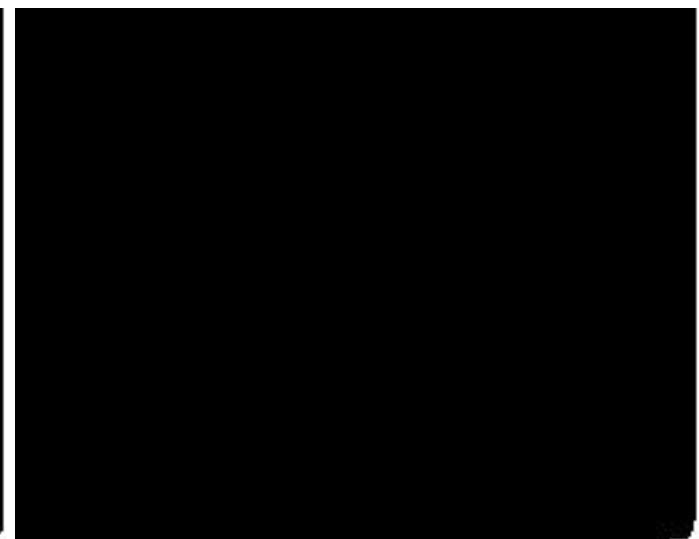
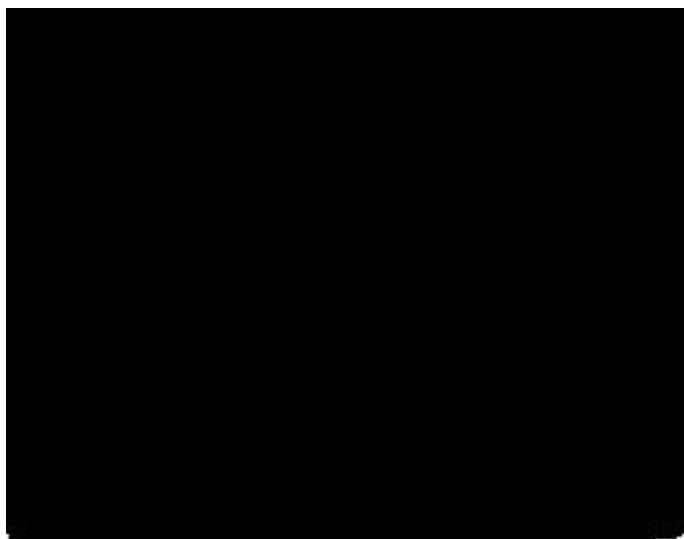
Ruta Imagen: sunflower/image\_0053.jpg

Tamaño Color-> 8.7 KB

Tamaño Escala GRIS 6.6 KB



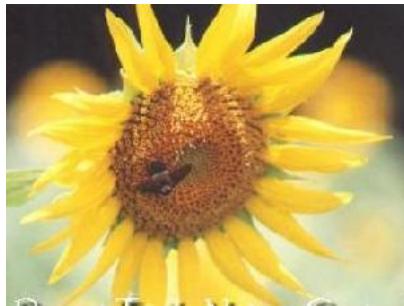
### Histogramas



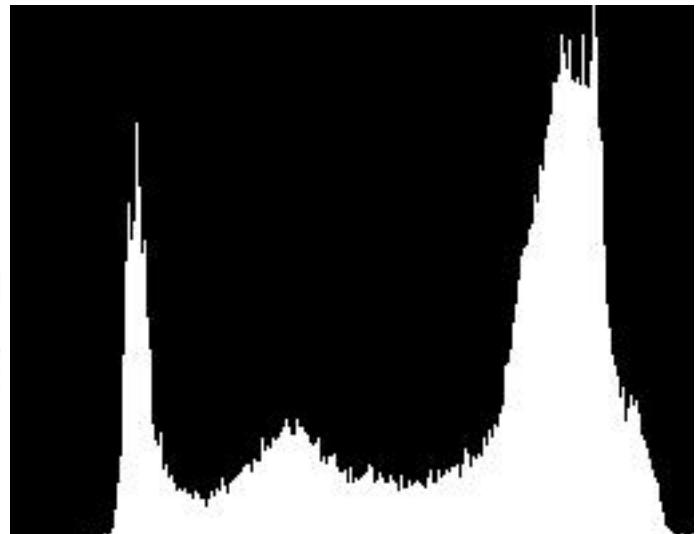
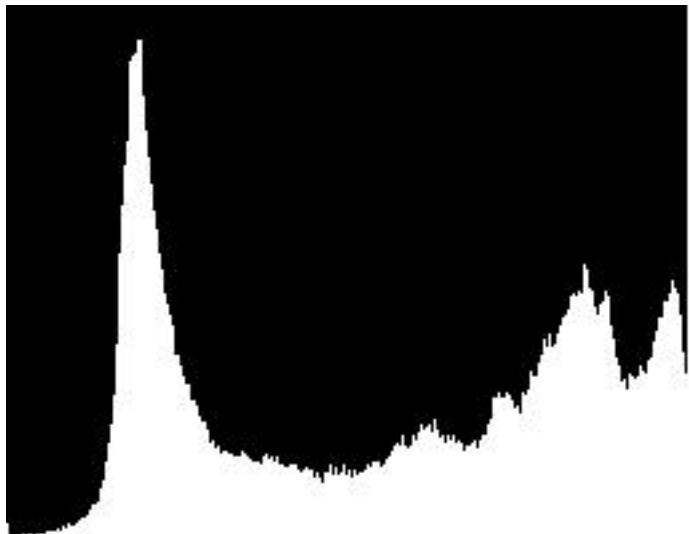
Ruta Imagen: sunflower/image\_0054.jpg

Tamaño Color-> 11.6 KB

Tamaño Escala GRIS 9.0 KB



### Histogramas



Ruta Imagen: sunflower/image\_0055.jpg

Tamaño Color-> 10.5 KB

Tamaño Escala GRIS 8.3 KB



### Histogramas



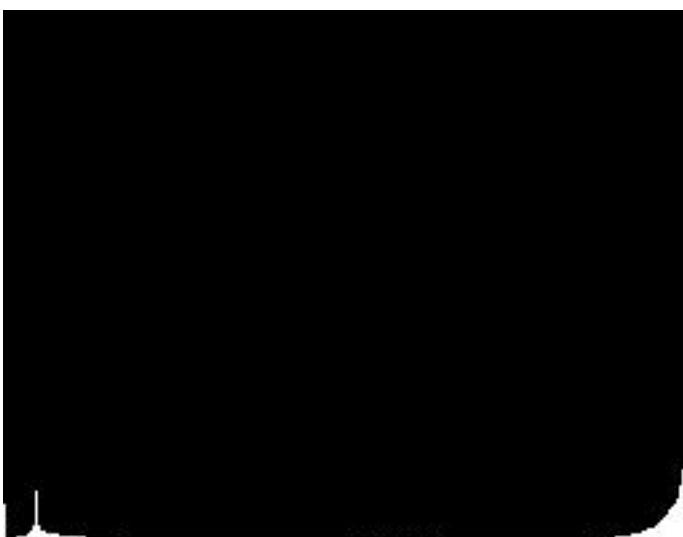
Ruta Imagen: sunflower/image\_0056.jpg

Tamaño Color-> 14.3 KB

Tamaño Escala GRIS 12.2 KB



### Histogramas



Ruta Imagen: sunflower/image\_0057.jpg

Tamaño Color-> 14.8 KB

Tamaño Escala GRIS 11.9 KB



### Histogramas



Ruta Imagen: sunflower/image\_0058.jpg

Tamaño Color-> 15.2 KB

Tamaño Escala GRIS 12.4 KB



### Histogramas



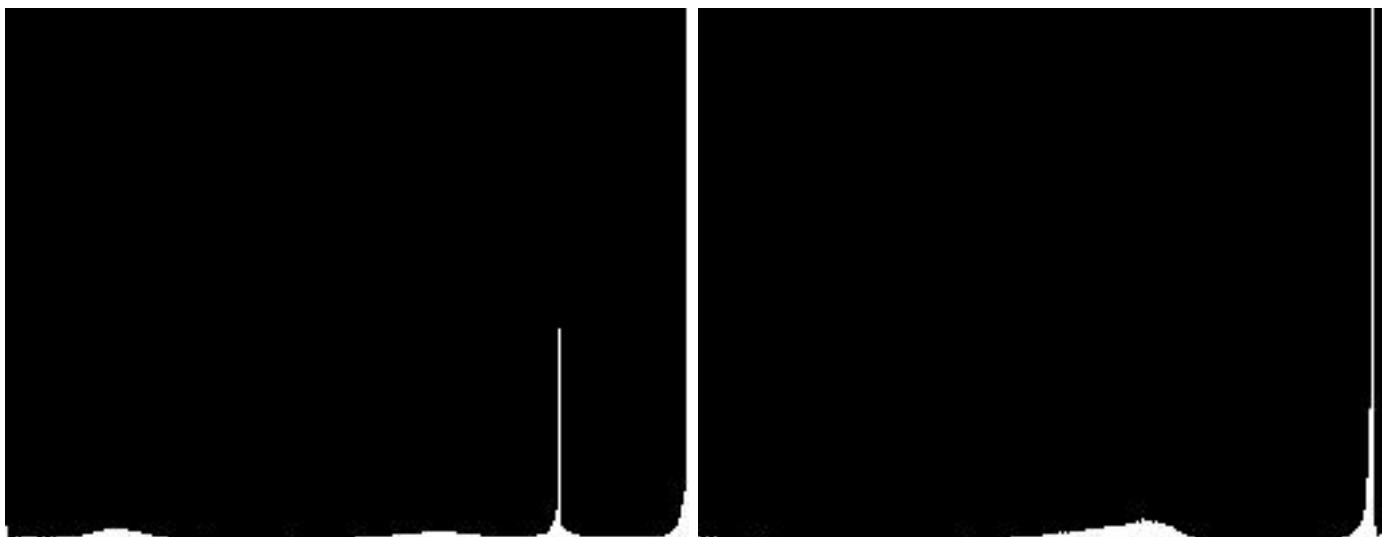
Ruta Imagen: sunflower/image\_0059.jpg

Tamaño Color-> 13.6 KB

Tamaño Escala GRIS 11.1 KB



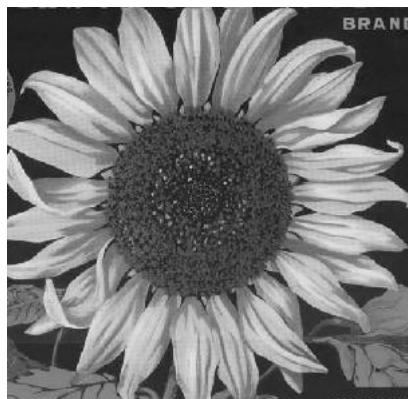
### Histogramas



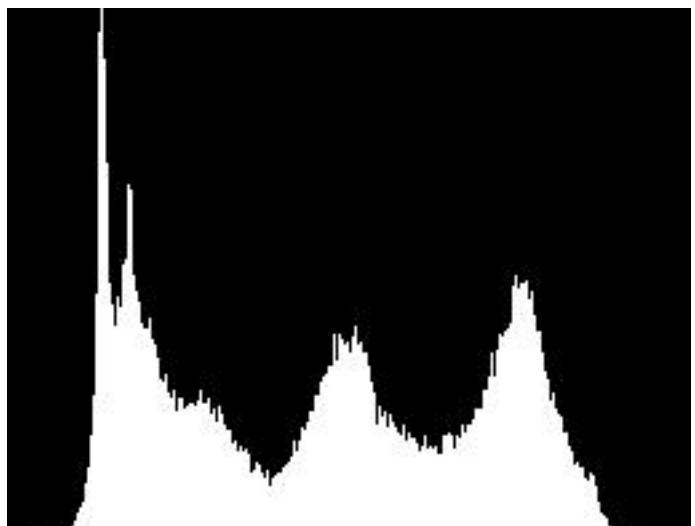
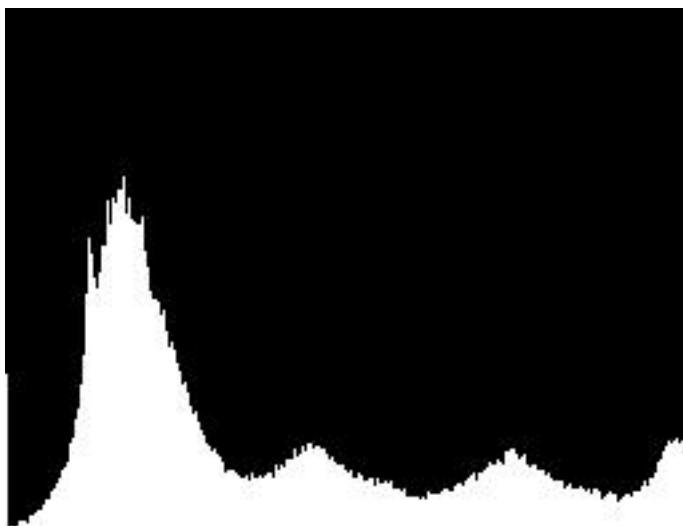
Ruta Imagen: sunflower/image\_0060.jpg

Tamaño Color-> 24.0 KB

Tamaño Escala GRIS 19.9 KB



### Histogramas



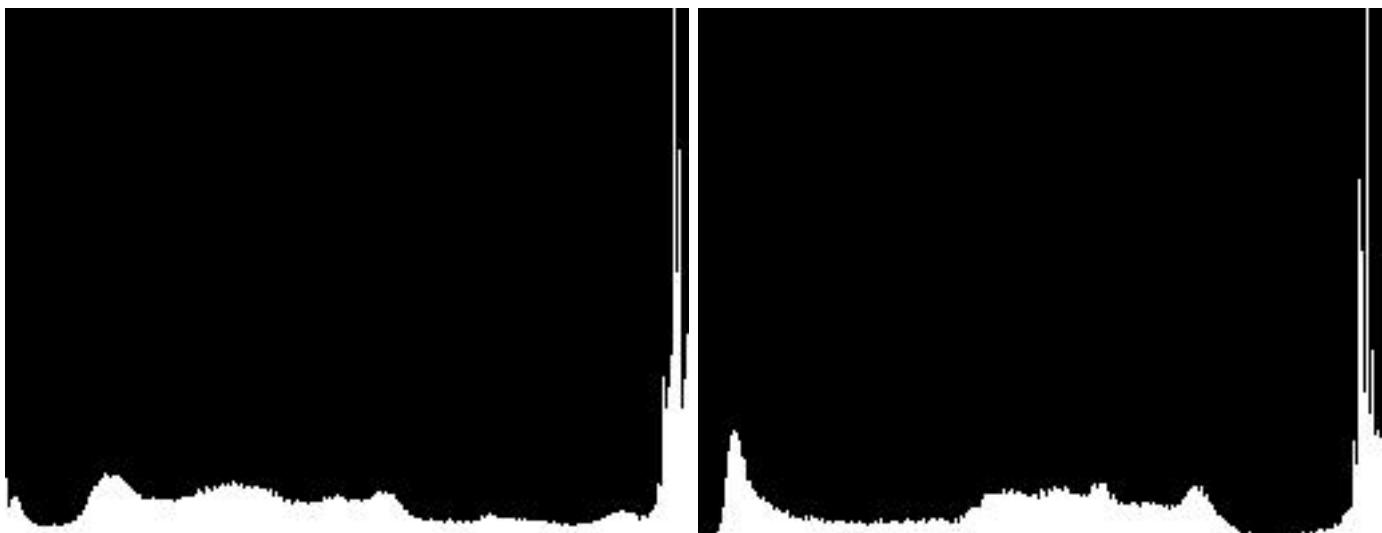
Ruta Imagen: sunflower/image\_0061.jpg

Tamaño Color-> 13.3 KB

Tamaño Escala GRIS 11.1 KB



### Histogramas



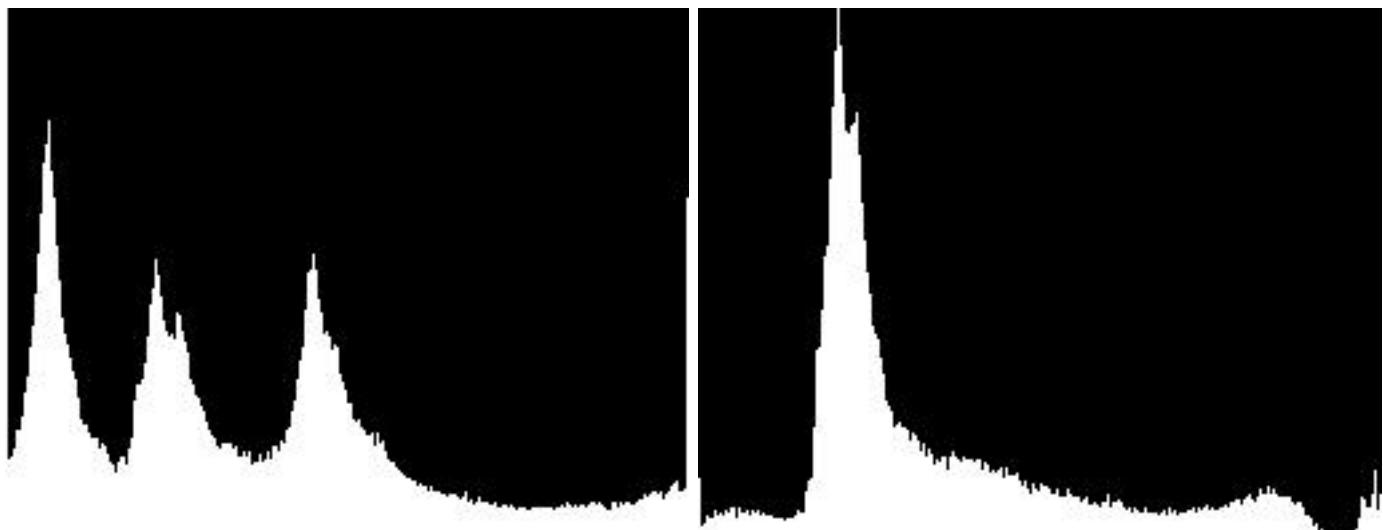
Ruta Imagen: sunflower/image\_0062.jpg

Tamaño Color-> 19.9 KB

Tamaño Escala GRIS 16.0 KB



### Histogramas



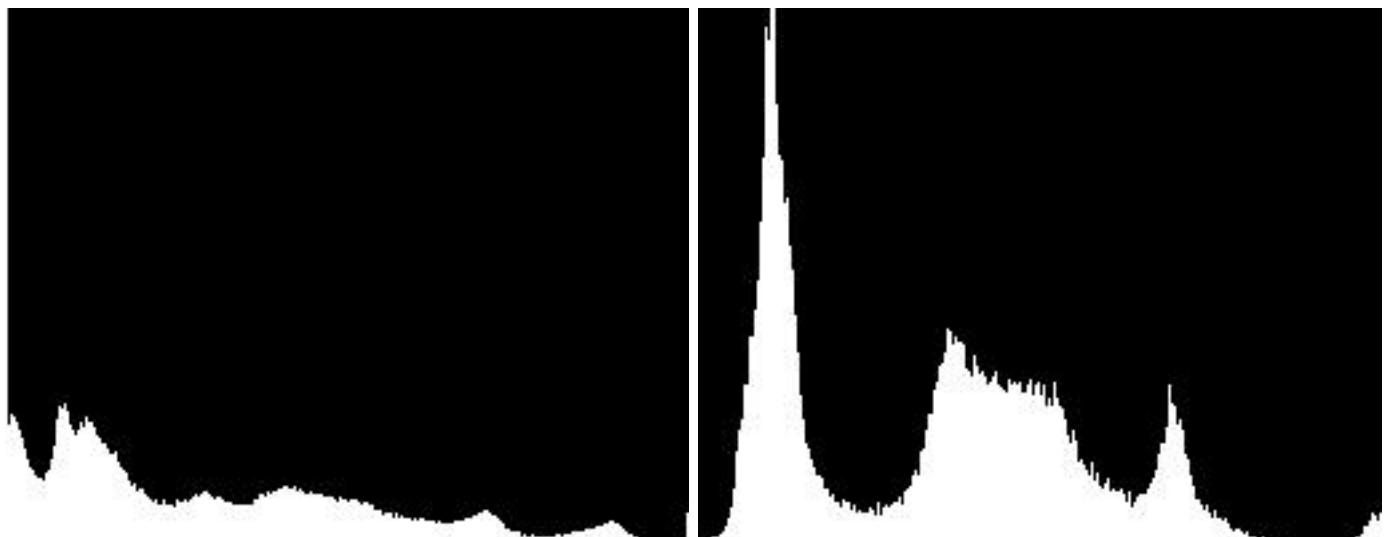
Ruta Imagen: sunflower/image\_0063.jpg

Tamaño Color-> 13.1 KB

Tamaño Escala GRIS 10.9 KB



### Histogramas



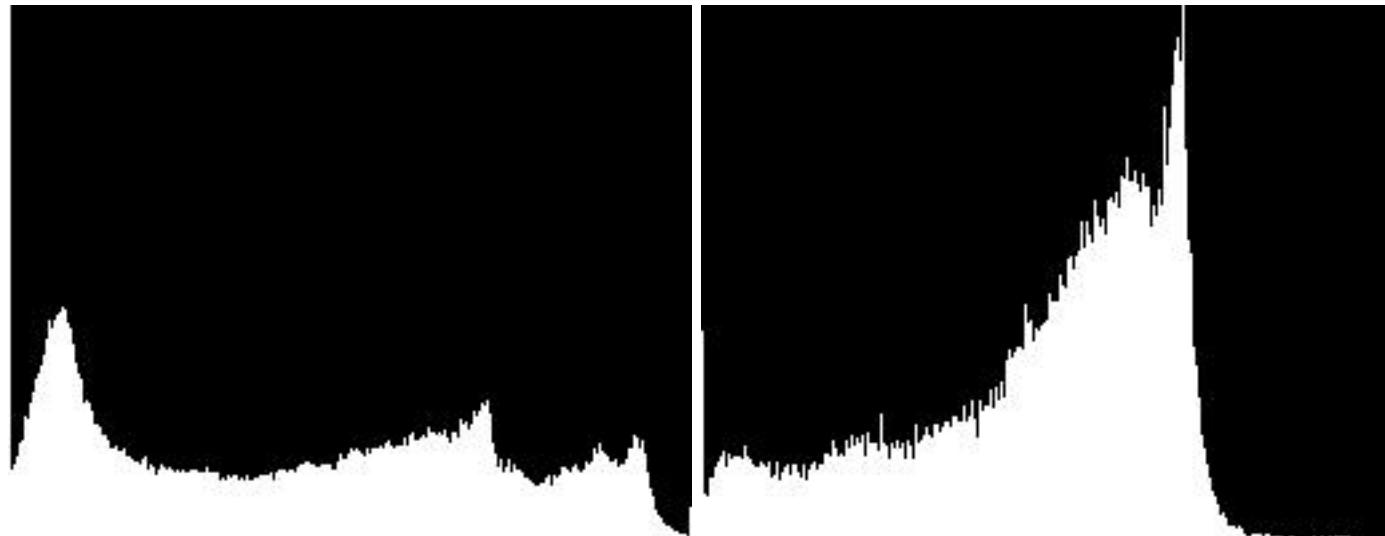
Ruta Imagen: sunflower/image\_0064.jpg

Tamaño Color-> 15.0 KB

Tamaño Escala GRIS 12.4 KB



### Histogramas



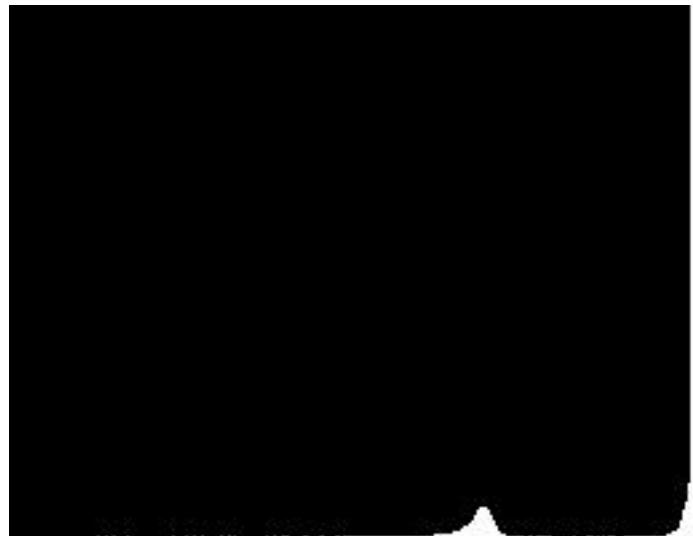
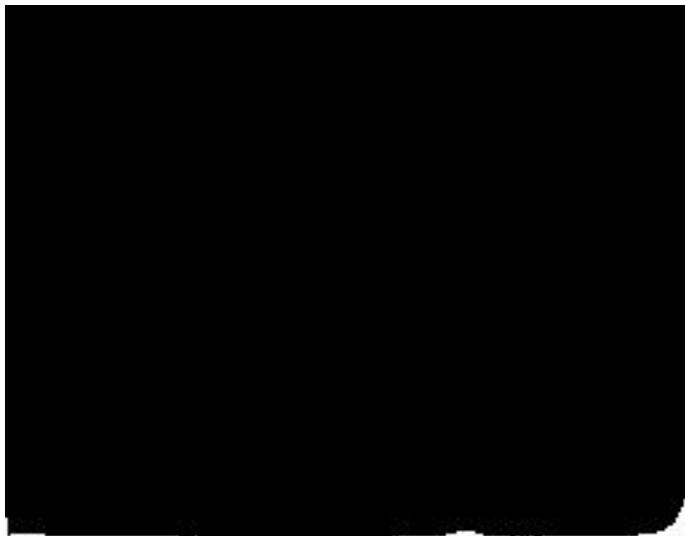
Ruta Imagen: sunflower/image\_0065.jpg

Tamaño Color-> 13.0 KB

Tamaño Escala GRIS 9.9 KB



### Histogramas



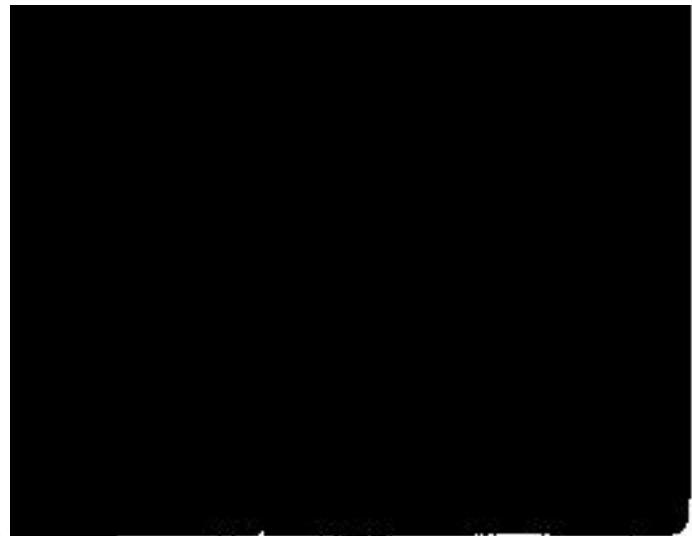
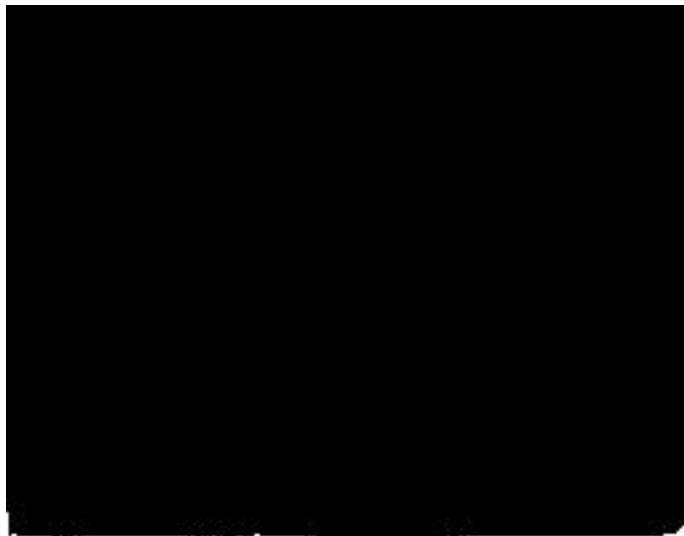
Ruta Imagen: sunflower/image\_0066.jpg

Tamaño Color-> 9.9 KB

Tamaño Escala GRIS 8.0 KB



### Histogramas



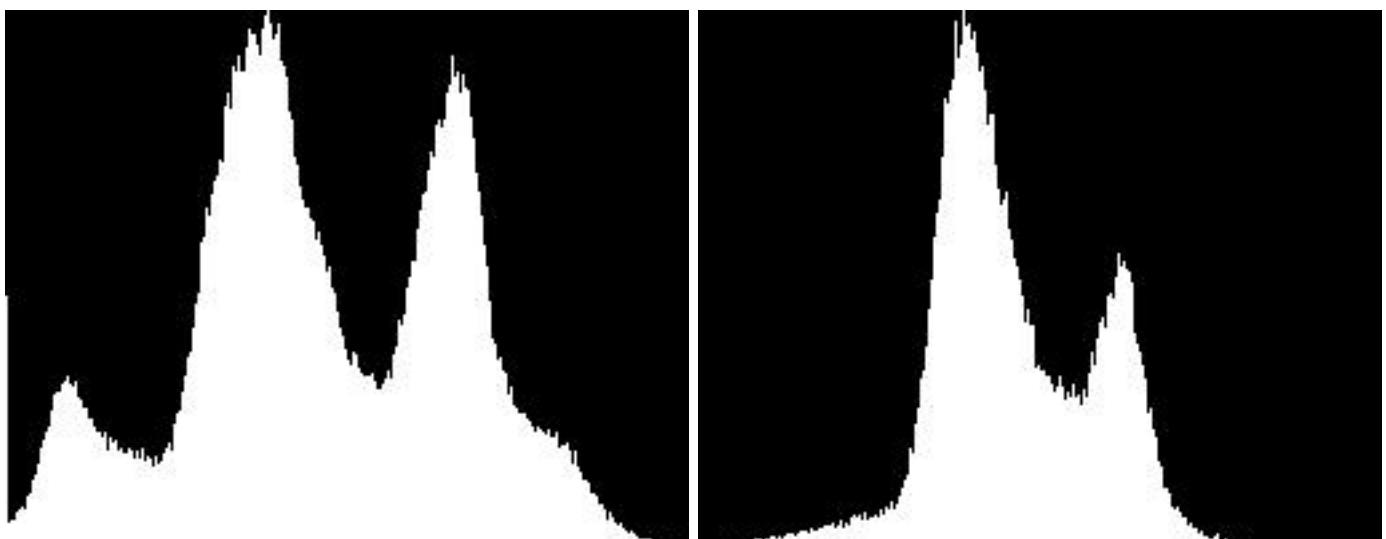
Ruta Imagen: sunflower/image\_0067.jpg

Tamaño Color-> 14.9 KB

Tamaño Escala GRIS 12.1 KB



### Histogramas



Ruta Imagen: sunflower/image\_0068.jpg

Tamaño Color-> 14.1 KB

Tamaño Escala GRIS 11.6 KB



### Histogramas



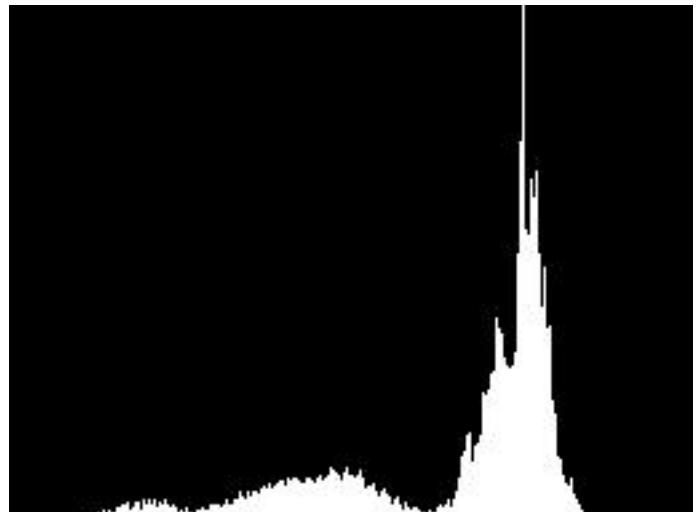
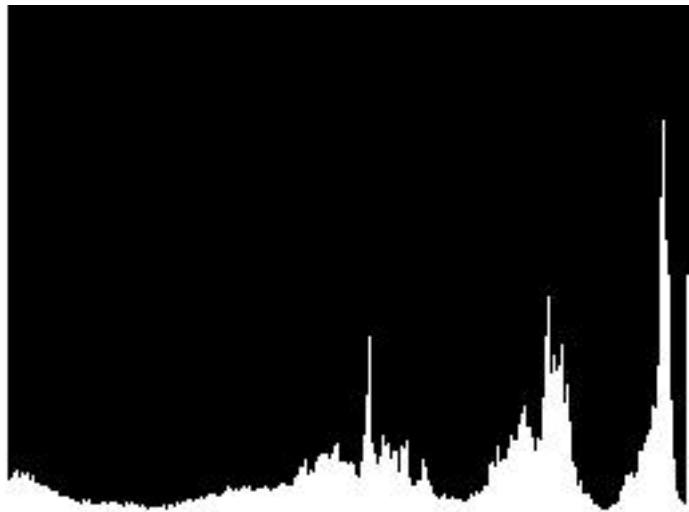
Ruta Imagen: sunflower/image\_0069.jpg

Tamaño Color-> 14.9 KB

Tamaño Escala GRIS 11.7 KB



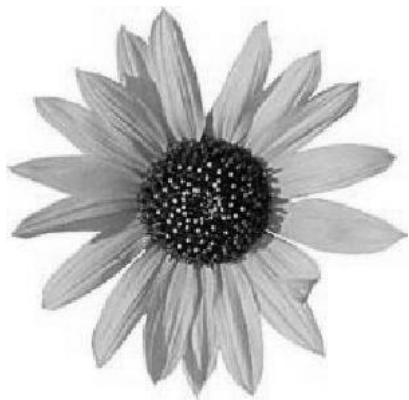
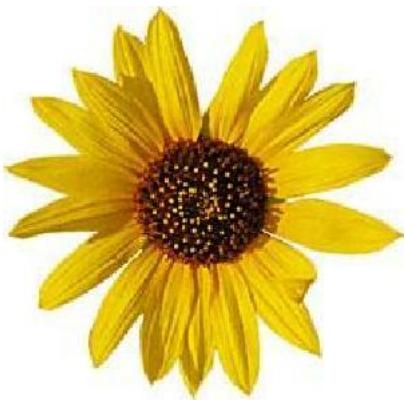
### Histogramas



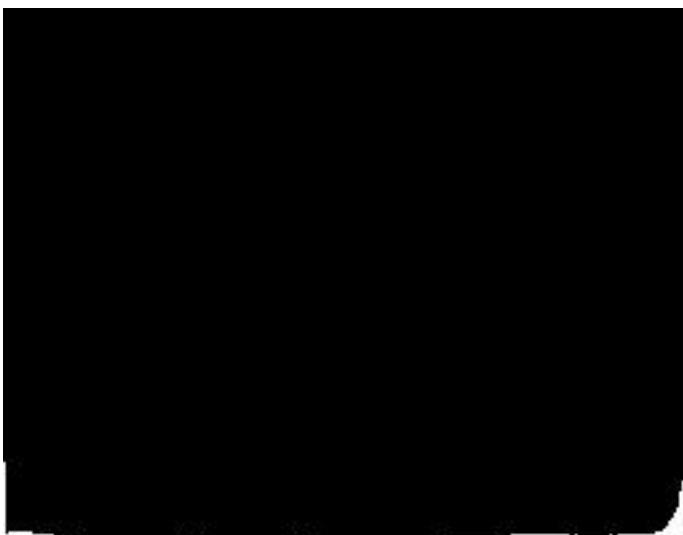
Ruta Imagen: sunflower/image\_0070.jpg

Tamaño Color-> 16.1 KB

Tamaño Escala GRIS 12.9 KB



### Histogramas



Ruta Imagen: sunflower/image\_0071.jpg

Tamaño Color-> 11.9 KB

Tamaño Escala GRIS 9.1 KB



### Histogramas



Ruta Imagen: sunflower/image\_0072.jpg

Tamaño Color-> 18.3 KB

Tamaño Escala GRIS 15.4 KB



### Histogramas



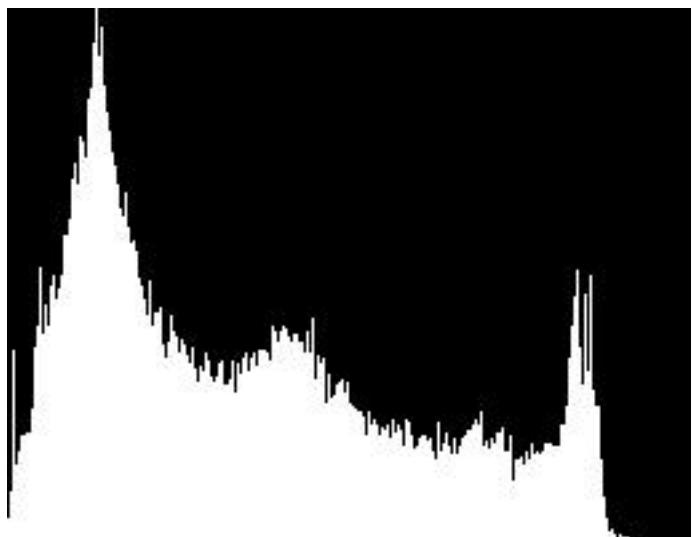
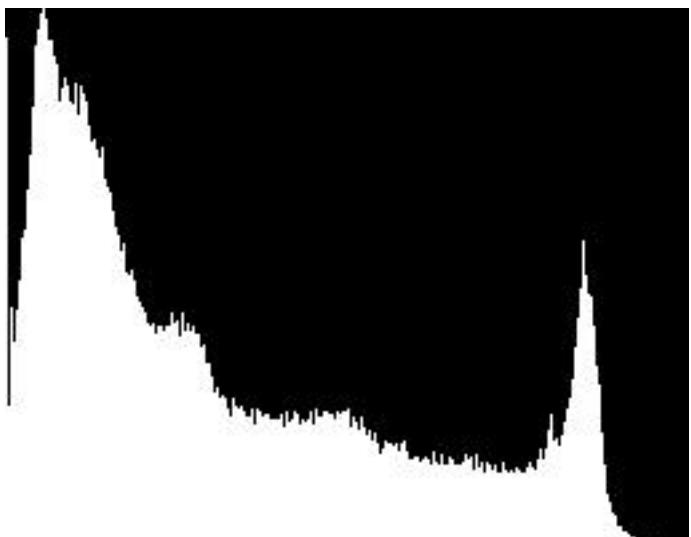
Ruta Imagen: sunflower/image\_0073.jpg

Tamaño Color-> 11.7 KB

Tamaño Escala GRIS 9.5 KB



### Histogramas



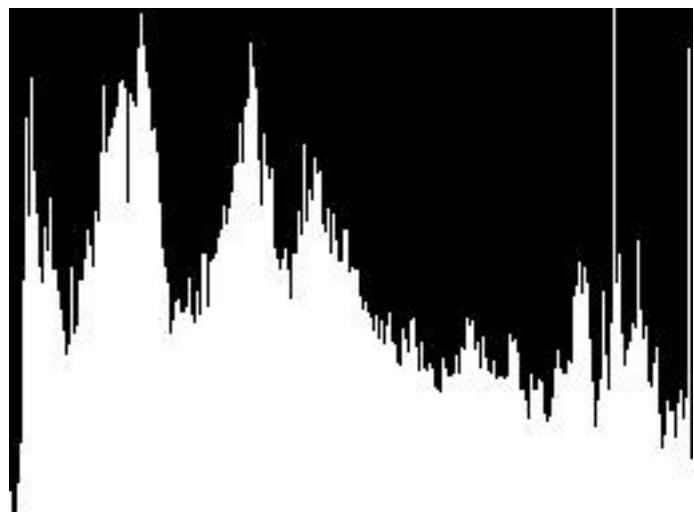
Ruta Imagen: sunflower/image\_0074.jpg

Tamaño Color-> 11.9 KB

Tamaño Escala GRIS 9.5 KB



### Histogramas



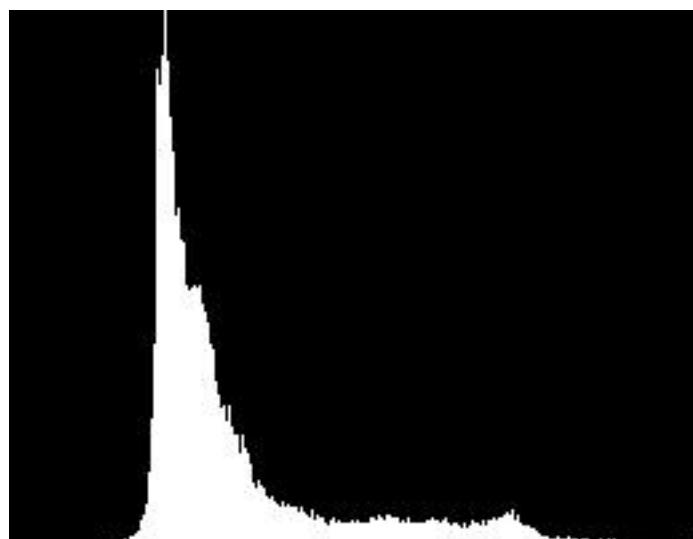
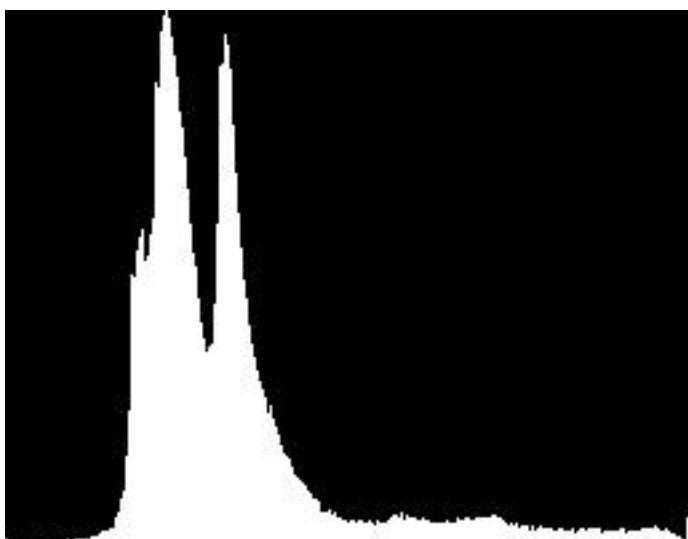
Ruta Imagen: sunflower/image\_0075.jpg

Tamaño Color-> 11.1 KB

Tamaño Escala GRIS 9.3 KB



### Histogramas



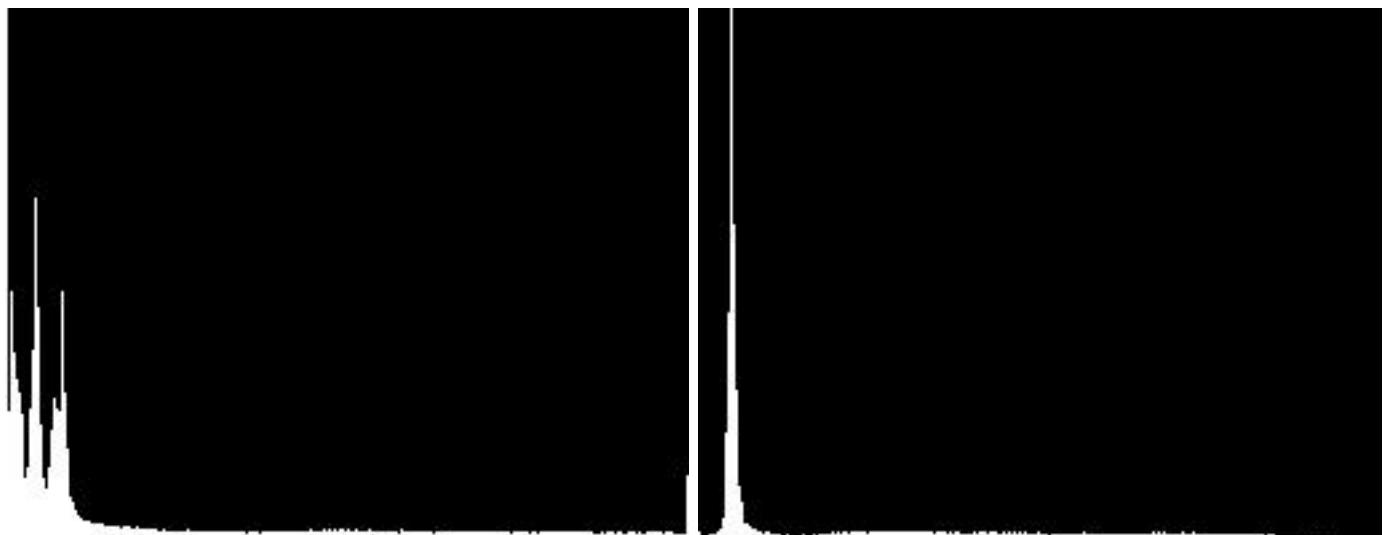
Ruta Imagen: sunflower/image\_0076.jpg

Tamaño Color-> 15.8 KB

Tamaño Escala GRIS 13.0 KB



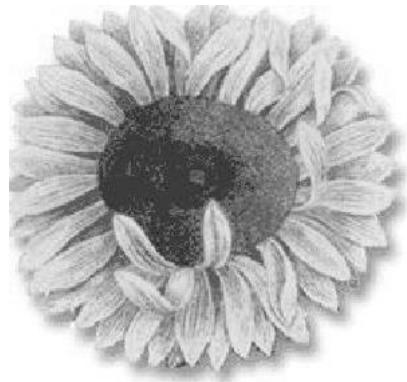
### Histogramas



Ruta Imagen: sunflower/image\_0077.jpg

Tamaño Color-> 18.6 KB

Tamaño Escala GRIS 15.3 KB



### Histogramas



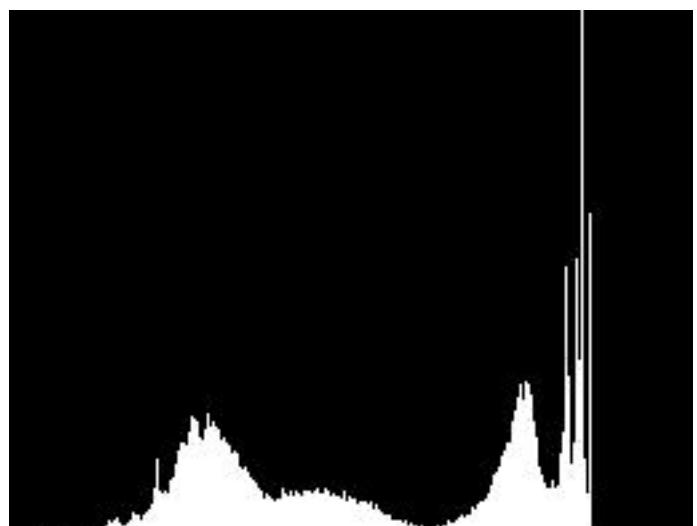
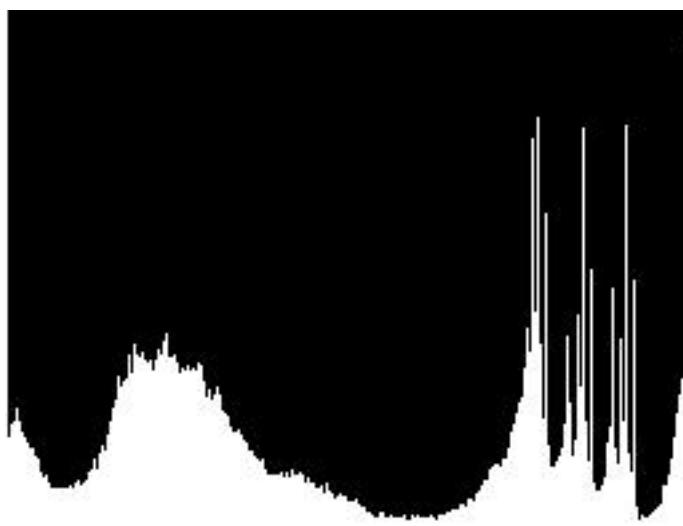
Ruta Imagen: sunflower/image\_0078.jpg

Tamaño Color-> 9.8 KB

Tamaño Escala GRIS 7.4 KB



### Histogramas



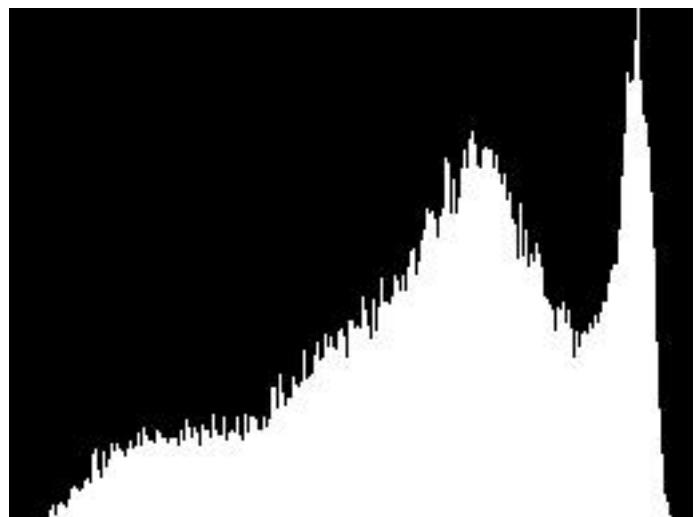
Ruta Imagen: sunflower/image\_0079.jpg

Tamaño Color-> 17.3 KB

Tamaño Escala GRIS 14.1 KB



### Histogramas



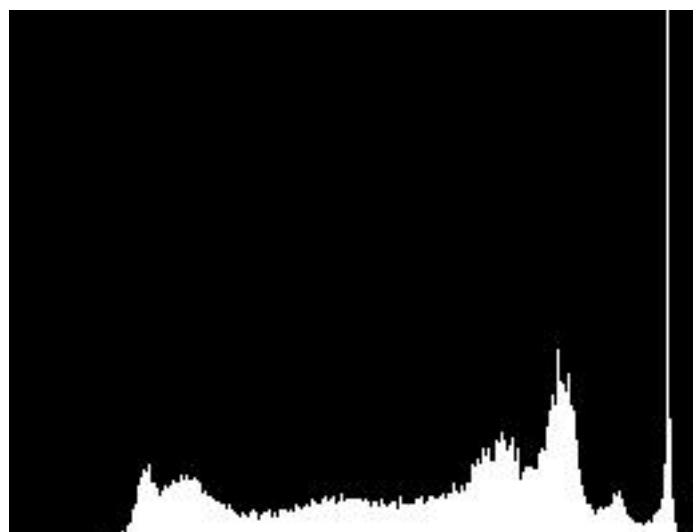
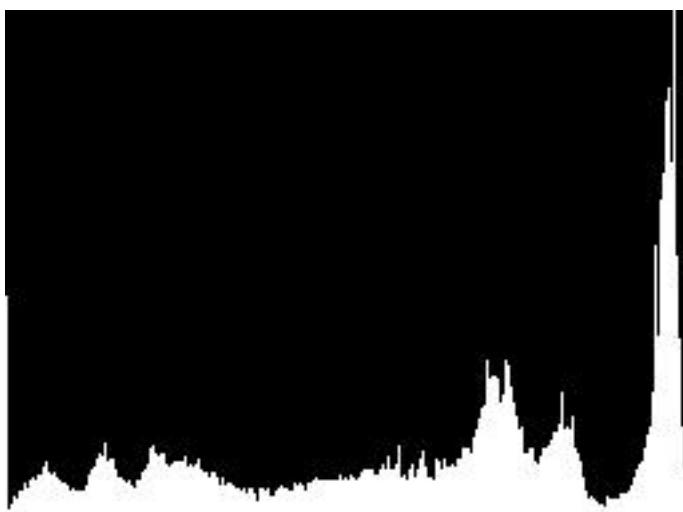
Ruta Imagen: sunflower/image\_0080.jpg

Tamaño Color-> 12.1 KB

Tamaño Escala GRIS 9.6 KB



### Histogramas



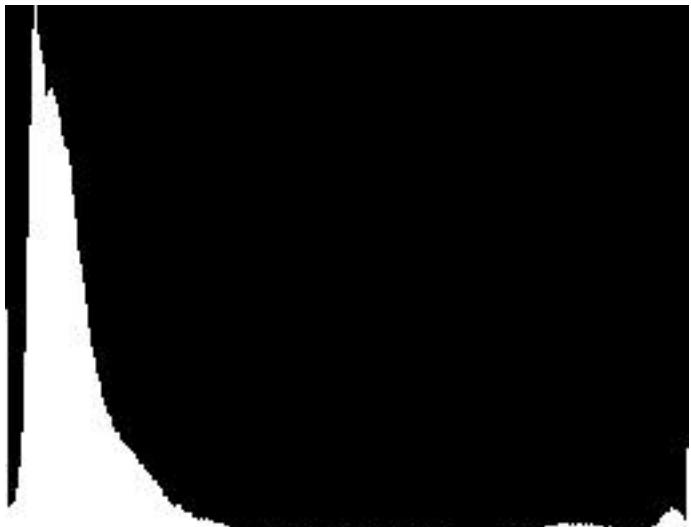
Ruta Imagen: sunflower/image\_0081.jpg

Tamaño Color-> 11.8 KB

Tamaño Escala GRIS 9.9 KB



### Histogramas



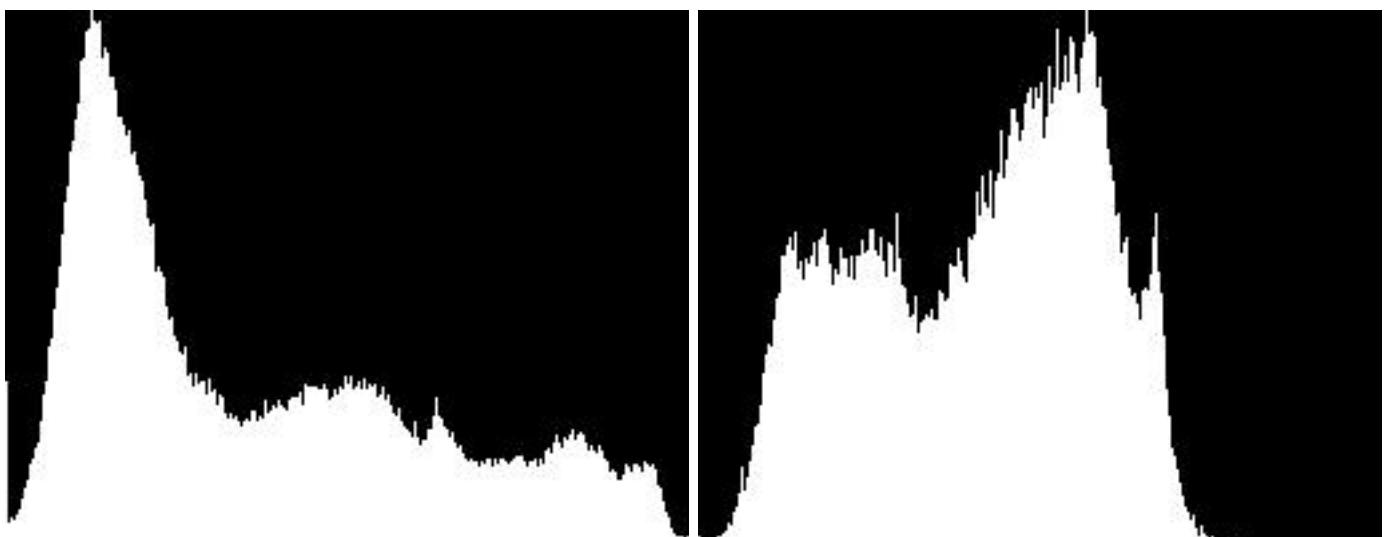
Ruta Imagen: sunflower/image\_0082.jpg

Tamaño Color-> 12.8 KB

Tamaño Escala GRIS 10.4 KB



### Histogramas



Ruta Imagen: sunflower/image\_0083.jpg

Tamaño Color-> 16.2 KB

Tamaño Escala GRIS 13.3 KB



### Histogramas



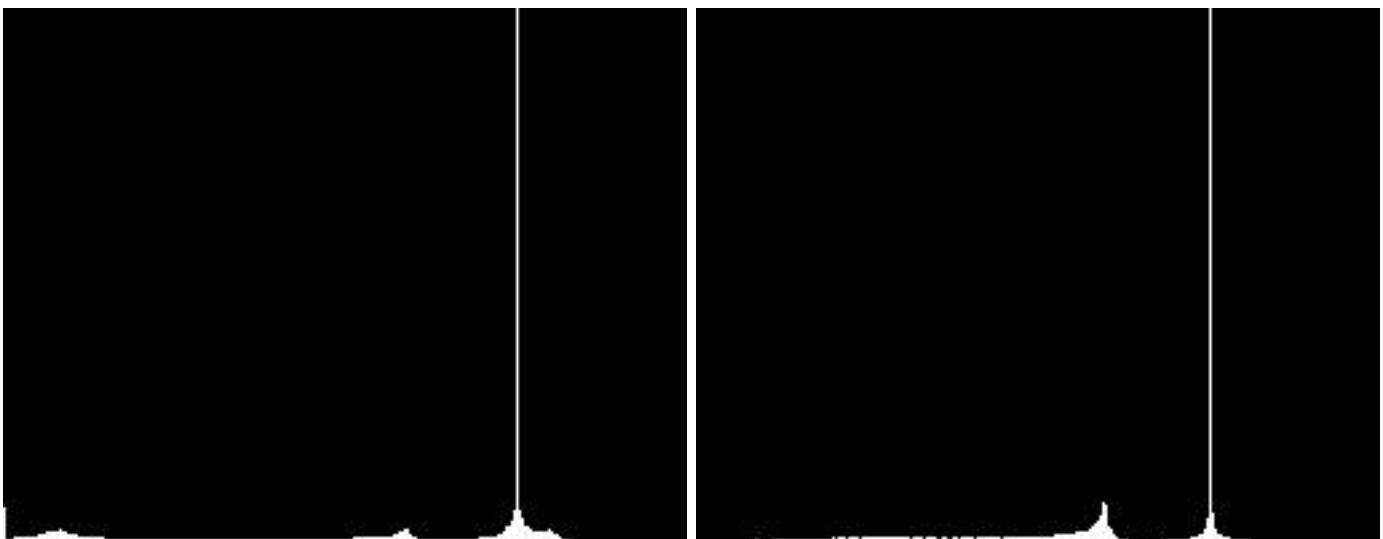
Ruta Imagen: sunflower/image\_0084.jpg

Tamaño Color-> 16.1 KB

Tamaño Escala GRIS 13.4 KB



### Histogramas



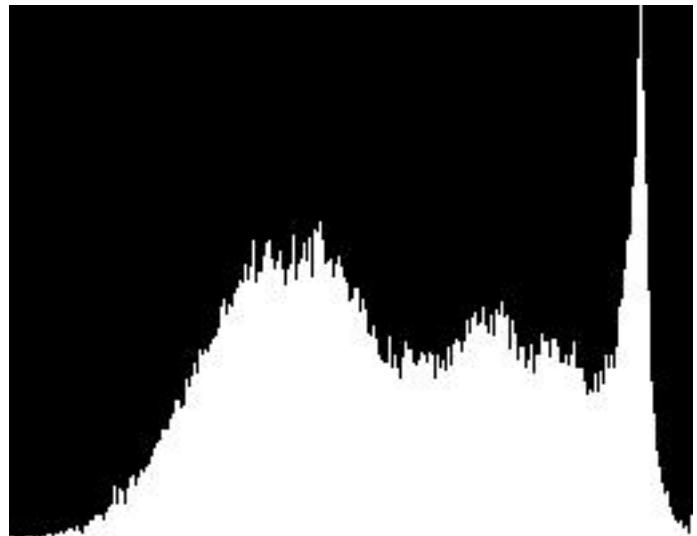
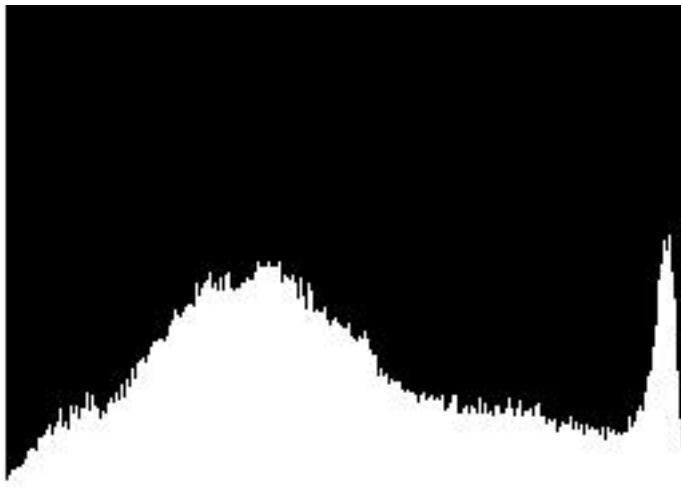
Ruta Imagen: sunflower/image\_0085.jpg

Tamaño Color-> 19.1 KB

Tamaño Escala GRIS 16.8 KB



### Histogramas



**Tiempo Empleado: 10.0046160221 segundos.**

**Tiempo Promedio: 0.1177013650 segundos.**

In [2]:

```
1 import os
2 from time import time
3 from datetime import date
4 from reportlab.lib.pagesizes import A4
5 from reportlab.pdfgen import canvas
6 import cv2
7
8 def imageC(ruta, ruta_agregar, ruta_histograma, ruta_histogris, dats):
9     titulo = "Ruta Imagen: " + ruta
10    text = doc.beginText(60, h-50)
11    text.setFont("Helvetica-Bold", 12)
12    text.textLines(titulo)
13    doc.drawText(text)
14    text = doc.beginText(60, h-70)
15    text.setFont("Helvetica-Bold", 12)
16    text.textLines(dats)
17    doc.drawText(text)
18    img = cv2.imread(ruta)
19    doc.drawImage(ruta, 50, h-250, width=img.shape[1]/2, height=img.shape[0]/2)
20    doc.drawImage(ruta_agregar, 310, h - 250, width=img.shape[1] / 2, height=img.shape[0] / 2)
21    text = doc.beginText(60, h-275)
22    text.setFont("Helvetica-Bold", 12)
23    text.textLines("Histogramas")
24    doc.drawText(text)
25    doc.drawImage(ruta_histograma, 50, h - 500, width=256, height=200)
26    doc.drawImage(ruta_histogris, 310, h - 500, width=256, height=200)
27    doc.showPage()
28
29 if __name__ == "__main__":
30
31     sis_os = "Windows"
32     ruta = 'sunflower/'
33     ruta_nc = ruta.split('/')[-2] + '_gray/'
34     if not os.path.exists(ruta_nc):
35         os.makedirs(ruta_nc)
36     os.system('mkdir histos')
37     w, h = A4
38     doc = canvas.Canvas("ComparacionImagenes.pdf", pagesize=A4)
39
40     text = doc.beginText(175, h - 100)
41     text.setFont('Times-Bold', 25)
42     text.textLines('Inteligencia Artificial II')
```

```
43     doc.drawText(text)
44
45     text = doc.beginText(145, h - 150)
46     text.setFont('Times-Bold', 20)
47     text.textLines('Comparación de rendimiento en PDI')
48     doc.drawText(text)
49     text = doc.beginText(180, h - 170)
50     text.setFont('Times-Bold', 20)
51     text.textLines('MS Windows vs GNU/Linux')
52     doc.drawText(text)
53
54     text = doc.beginText(240, h - 250)
55     text.setFont('Times-Bold', 12)
56     text.textLines('Autor: ')
57     doc.drawText(text)
58
59     text = doc.beginText(280, h - 250)
60     text.setFont('Times-Roman', 12)
61     text.textLines('Malki Yupanki')
62     doc.drawText(text)
63
64     text = doc.beginText(240, h - 300)
65     text.setFont('Times-Bold', 12)
66     text.textLines('Fecha: ')
67     doc.drawText(text)
68
69     text = doc.beginText(280, h - 300)
70     text.setFont('Times-Roman', 12)
71     text.textLines(str(date.today()))
72     doc.drawText(text)
73
74     text = doc.beginText(100, h - 400)
75     text.setFont('Times-Bold', 30)
76     text.textLines('Reporte de Resultados Windows')
77     doc.drawText(text)
78
79     text = doc.beginText(160, h - 500)
80     text.setFont('Times-Bold', 20)
81     text.textLines('Universidad Politécnica Salesiana')
82     doc.drawText(text)
83
84     doc.showPage()
85
```

```
86 tiempo_inicio = time()
87 arreglo_imagenes = os.listdir(ruta)
88 for i in sorted(arreglo_imagenes):
89     ruta_agregar = ruta_nc + i.split('.')[0] + '_gray.jpg'
90     ruta_histograma = 'histos/' + i.split('.')[0] + '_histo.jpg'
91     ruta_histoGris = 'histos/' + i.split('.')[0] + '_histo_gray.jpg'
92     comando_convert = 'magick convert {} -colorspace gray {}'.format(ruta + i, ruta_agregar)
93     os.system(comando_convert)
94     dat = 'Tamaño Color-> {} KB           Tamaño Escala GRIS {} KB'.format(
95         round(((os.path.getsize(ruta + i)) / 1024), 1), round(((os.path.getsize(ruta_agregar)) / 1024), 1))
96     col_histo = 'magick convert {} -separate -append -define histogram:unique-colors=false histogram:unique-colors=false {}'.format(ruta + i, ruta_histograma)
97     gris_histo = 'magick convert {} -separate -append -define histogram:unique-colors=false histogram:unique-colors=false {}'.format(ruta_agregar, ruta_histoGris)
98     os.system(col_histo)
99     os.system(gris_histo)
100    imageC(ruta + i, ruta_agregar, ruta_histograma, ruta_histoGris, dat)
101
102    tiempo_final = time() - tiempo_inicio
103
104    text = doc.beginText(50, h - 50)
105    text.setFont('Times-Bold', 20)
106    text.textLines("Tiempo Empleado: %.10f segundos." % tiempo_final)
107    doc.drawText(text)
108
109    text = doc.beginText(50, h - 75)
110    text.setFont('Times-Bold', 20)
111    text.textLines("Tiempo Promedio: %.10f segundos." % (tiempo_final / len(arreglo_imagenes)))
112    doc.drawText(text)
113
114    doc.showPage()
115    doc.save()
```

In [3]:

```
import os
from time import time
from datetime import date
from reportlab.lib.pagesizes import A4
from reportlab.pdfgen import canvas
import cv2

def imageC(ruta, ruta_agregar, ruta_histograma, ruta_histGris, dat
    titulo = "Ruta Imagen: " + ruta
    text = doc.beginText(60, h-50)
    text.setFont("Helvetica-Bold", 12)
    text.textLines(titulo)
    doc.drawText(text)
    text = doc.beginText(60, h-70)
    text.setFont("Helvetica-Bold", 12)
    text.textLines(dats)
    doc.drawText(text)
    img = cv2.imread(ruta)
    doc.drawImage(ruta, 50, h-250, width=img.shape[1]/2, height=img
    doc.drawImage(ruta_agregar, 310, h - 250, width=img.shape[1] /
    text = doc.beginText(60, h-275)
    text.setFont("Helvetica-Bold", 12)
    text.textLines("Histogramas")
    doc.drawText(text)
    doc.drawImage(ruta_histograma, 50, h - 500, width=256, height=2
    doc.drawImage(ruta_histGris, 310, h - 500, width=256, height=2
    doc.showPage()

if __name__ == "__main__":
    sis_os="Linux"
    ruta ='sunflower/'
    ruta_nc=ruta.split('/')[-2]+'_gray/'
    os.system('mkdir '+ruta_nc)
    os.system('mkdir histos')
    w,h = A4
    doc = canvas.Canvas("Informe_"+sis_os+".pdf", pagesize=A4)

    text = doc.beginText(175, h - 100)
    text.setFont('Times-Bold', 25)
    text.textLines('Inteligencia Artificial II')
    doc.drawText(text)

    text = doc.beginText(145, h - 150)
    text.setFont('Times-Bold', 20)
    text.textLines('Comparación de rendimiento en PDI')
    doc.drawText(text)
    text = doc.beginText(180, h - 170)
    text.setFont('Times-Bold', 20)
    text.textLines('MS Windows vs GNU/Linux')
    doc.drawText(text)

    text = doc.beginText(240, h - 250)
    text.setFont('Times-Bold', 12)
    text.textLines('Autor: ')
    doc.drawText(text)

    text = doc.beginText(280, h - 250)
```

```
text.setFont('Times-Roman', 12)
text.textLines('Malki Yupanki')
doc.drawText(text)

text = doc.beginText(240, h - 300)
text.setFont('Times-Bold', 12)
text.textLines('Fecha: ')
doc.drawText(text)

text = doc.beginText(280, h - 300)
text.setFont('Times-Roman', 12)
text.textLines(str(date.today()))
doc.drawText(text)

text = doc.beginText(100, h - 400)
text.setFont('Times-Bold', 30)
text.textLines('Reporte de Resultados Linux')
doc.drawText(text)

text = doc.beginText(160, h - 500)
text.setFont('Times-Bold', 20)
text.textLines('Universidad Politécnica Salesiana')
doc.drawText(text)

doc.showPage()

tiempo_inicio = time()
arreglo_imagenes = os.listdir(ruta)
for i in sorted(arreglo_imagenes):
    ruta_agregar=ruta_nc+i.split('.')[0]+'_gray.jpg'
    ruta_histograma='histos/'+i.split('.')[0]+'_histo.jpg'
    ruta_histoGris='histos/'+i.split('.')[0]+'_histo_gray.jpg'
    comando_convert ='convert {} -colorspace gray {}'.format(ruta_agregar)
    os.system(comando_convert)
    men='Tamaño Color-> {} KB           Tamaño Escala GRIS {} KB'
    col_histo='convert {} -separate -append -define histogram:u'
    gris_histo='convert {} -separate -append -define histogram:u'
    os.system(col_histo)
    os.system(gris_histo)
    imageC(ruta+i,ruta_agregar,ruta_histograma,ruta_histoGris,men)

tiempo_final = time() - tiempo_inicio

text = doc.beginText(50,h - 50)
text.setFont('Times-Bold',20)
text.textLines("Tiempo Empleado: %.10f segundos." % tiempo_final)
doc.drawText(text)

text = doc.beginText(50,h - 75)
text.setFont('Times-Bold',20)
text.textLines("Tiempo Promedio: %.10f segundos." % (tiempo_final/len(arreglo_imagenes)))
doc.drawText(text)

doc.showPage()
doc.save()
```

In [ ]: