

```
In[1]:= mainDir = SetDirectory[NotebookDirectory[]];
<< swKnowledgeSVM110`
```

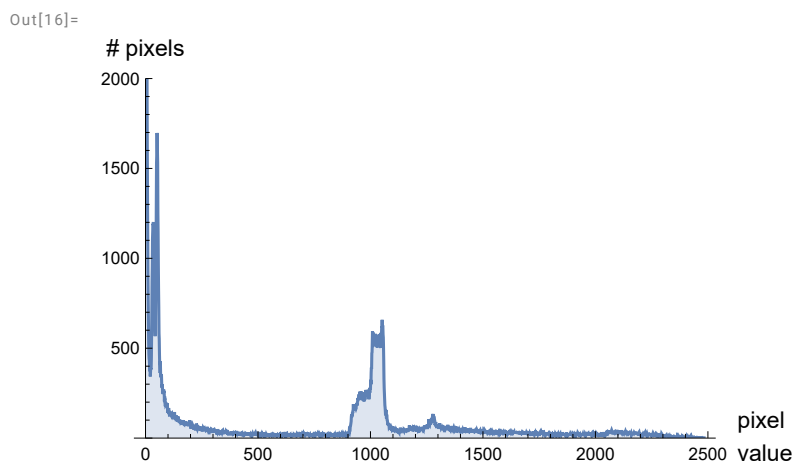
```
In[3]:= fileNames = StringTake[FileNames["*.png"], {1, -5}]
i = 4;
file = fileNames[[i]] <> ".png";
dataImg = Import[file, "Data"];
```

```
Out[3]= {01-IMG-0007-00026, 02-IMG-0002-00001, 03-IMG-0001-00001, 04-ID_b052ca590}
```

```
In[7]:= norm1 = 16;
dataImg = Import[file, "Data"];
sortList = Sort[Flatten[Flatten[Round[dataImg / norm1]]]];
uDataImg = Union[Flatten[Flatten[Round[dataImg / norm1]]]];
Dimensions[uDataImg]
pairsSortList = Tally[sortList];
p0 = pairsSortList[[1]]
p1 = Delete[pairsSortList, {1}];
p1 = Delete[p1, {-1}];
img1 = ListPlot[p1, Joined -> {True},
  AxesLabel -> {Text[Style[" pixel\n value", Medium]], Text[Style["# pixels", Medium]]},
  Filling -> Axis, PlotRange -> {All, {0, 2000}}]
```

```
Out[11]=
{2332}
```

```
Out[13]=
{0, 54291}
```



```
In[17]:= Text
```

```
Out[17]=
Text
```

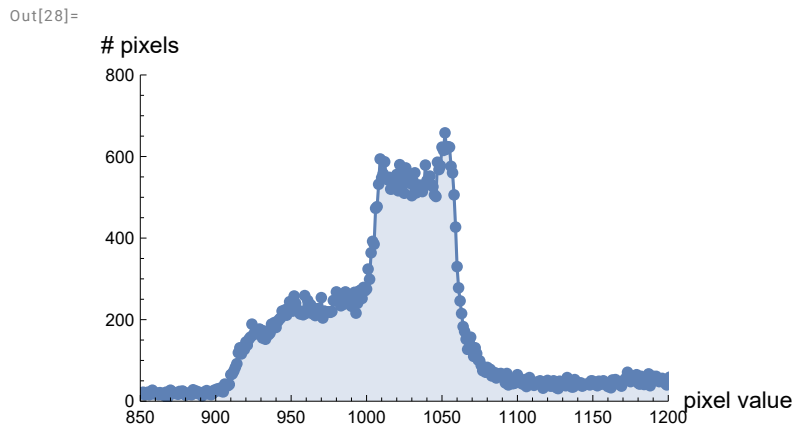
```

In[18]:= norm1 = 16;
dataImg = Import[file, "Data"];
sortList = Sort[Flatten[Flatten[Round[dataImg / norm1]]]];
uDataImg = Union[Flatten[Flatten[Round[dataImg / norm1]]]];
Dimensions[uDataImg]
pairsSortList = Tally[sortList];
p0 = pairsSortList[[1]]
pAll = Delete[pairsSortList, {1}];
pAll = Delete[pAll, {-1}];
p1 = Delete[pAll, {-1}];
img2 = ListPlot[p1, Joined → {True}, PlotMarkers → Automatic,
  AxesLabel → {Text[Style["pixel value", Medium]], Text[Style["# pixels", Medium]]},
  Filling → Axis, PlotRange → {{850, 1200}, {0, 800}}]

```

Out[22]=  
{2332}

Out[24]=  
{0, 54291}



```

In[29]:= n0 = 971;
          n1 = 1.5;
          norm1 = 16;
          dataImg = Import[file, "Data"];
          normDataImg0 = Round[dataImg / norm1];
          uData = Union[Flatten[Flatten[normDataImg0]]];
          subs1 = Table[uData[[i]] -> uData[[-1]], {i, n0}];
          normDataImg = normDataImg0 /. subs1;
          mMD = MinMax[normDataImg];
          normDataImg1 = Clip[(normDataImg - mMD[[1]]) / (mMD[[2]] - mMD[[1]])];
          (mMD[[2]] - mMD[[1]])
          {MinMax[normDataImg1], n1}
          img3 = Image[n1 * normDataImg1]

```

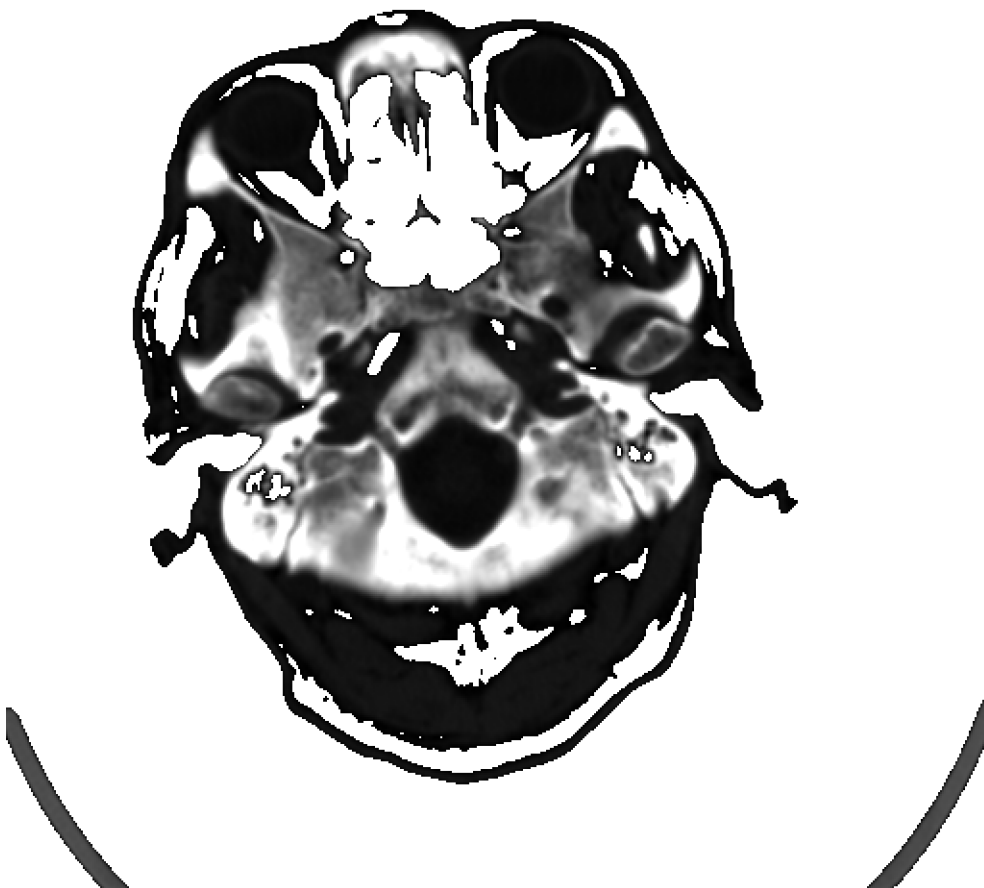
Out[39]=

1517

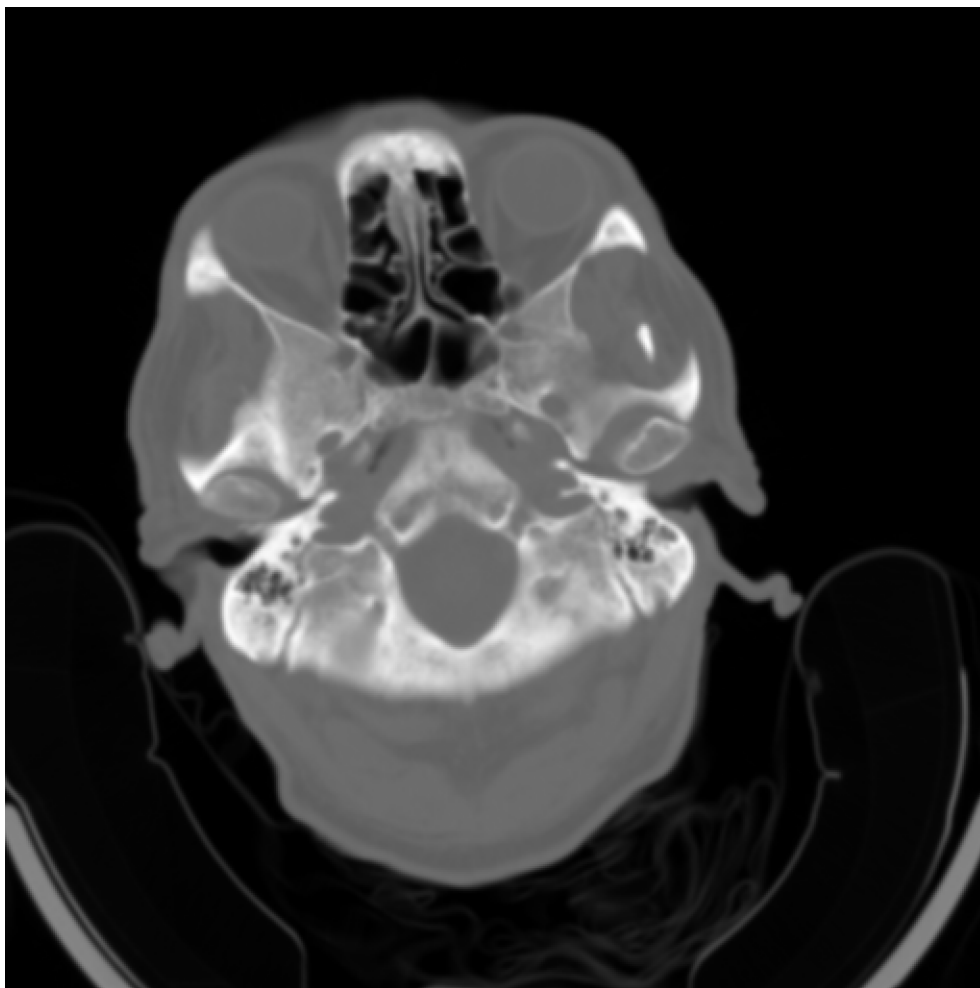
Out[40]=

{{0, 1}, 1.5}

Out[41]=



```
In[42]:= img0 = ImageAdjust[Image[dataImg]]  
Out[42]=
```



```
In[43]:= (*  
Export["D2fig011a.tif",img1,ImageResolution->300];  
Export["D2fig011b.tif",img2,ImageResolution->300];  
Export["D2fig011c.tif",img3,ImageResolution->300];  
Export["D2fig011d.tif",img0,ImageResolution->300];  
*)
```