EE386 Lab 7: Imaging Zooming by Interpolation

Presented by
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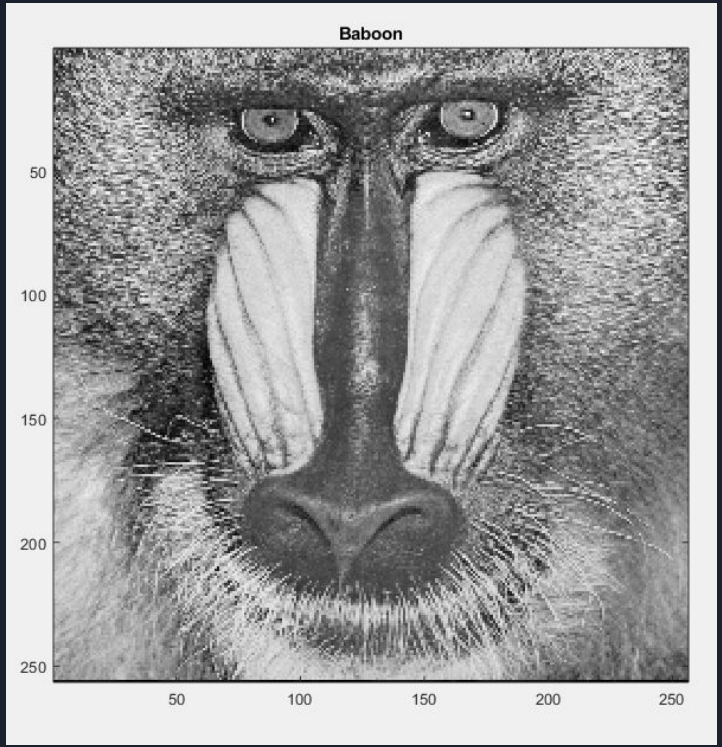
Original Picture: Baboon

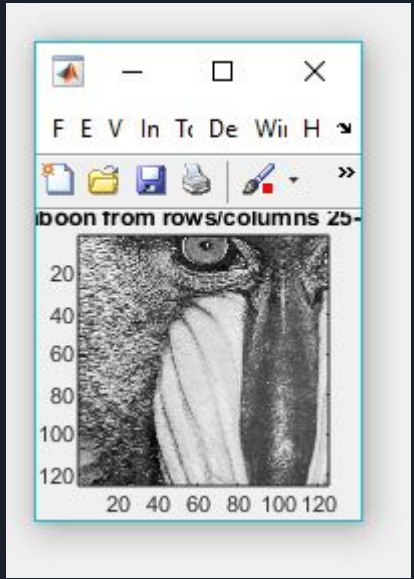
- A double class image of 256x256 bytes
- Found from spfirst.gatech.edu toolbox
- Listed as .mat file needed show_img()
  - imshow() gives black screen

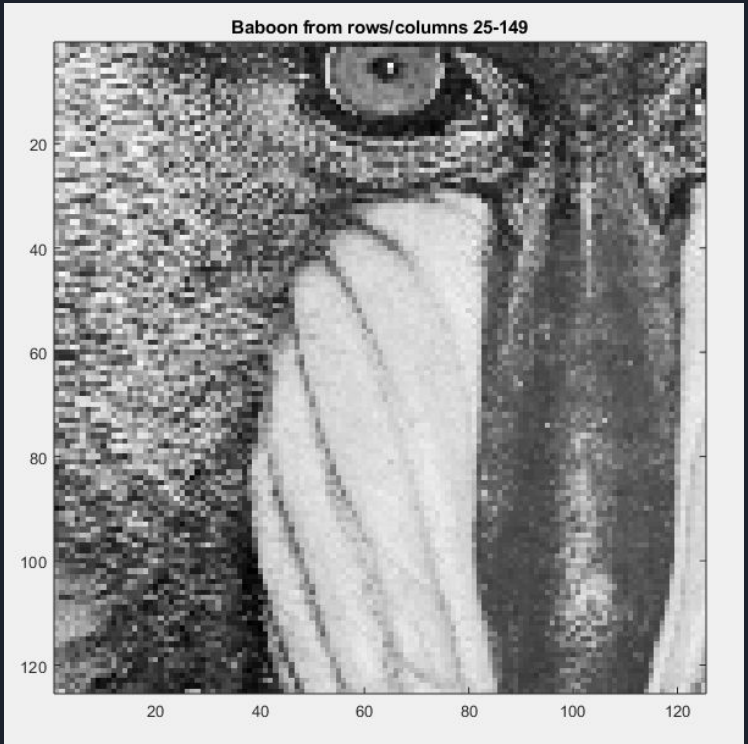
```
>> whos
  Name        Size                Bytes  Class     Attributes

  xx        256x256              524288  double
```



Zoomed in Version

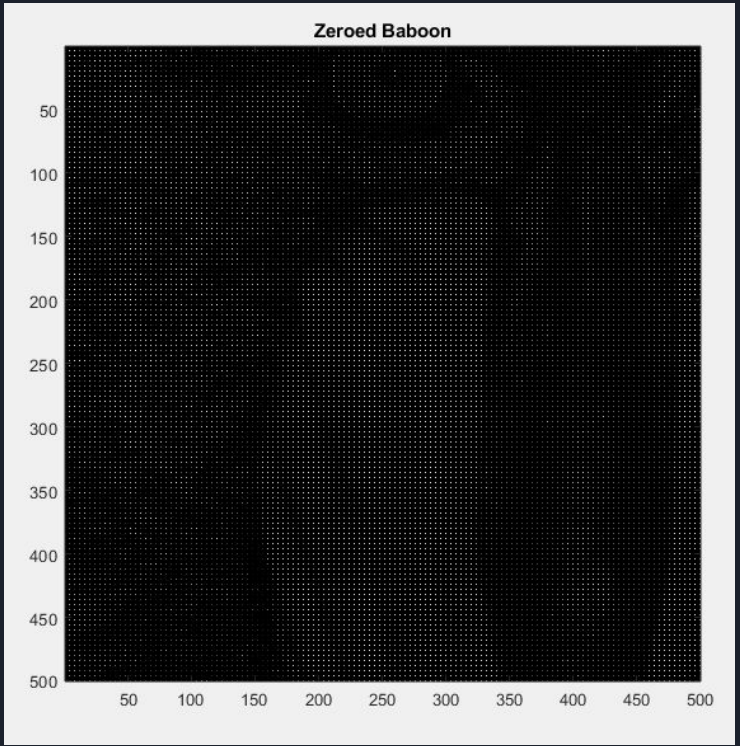
- Rows & columns 25 -> 149
- Relative to actual unit size
- Resolution size of the window changes scaling





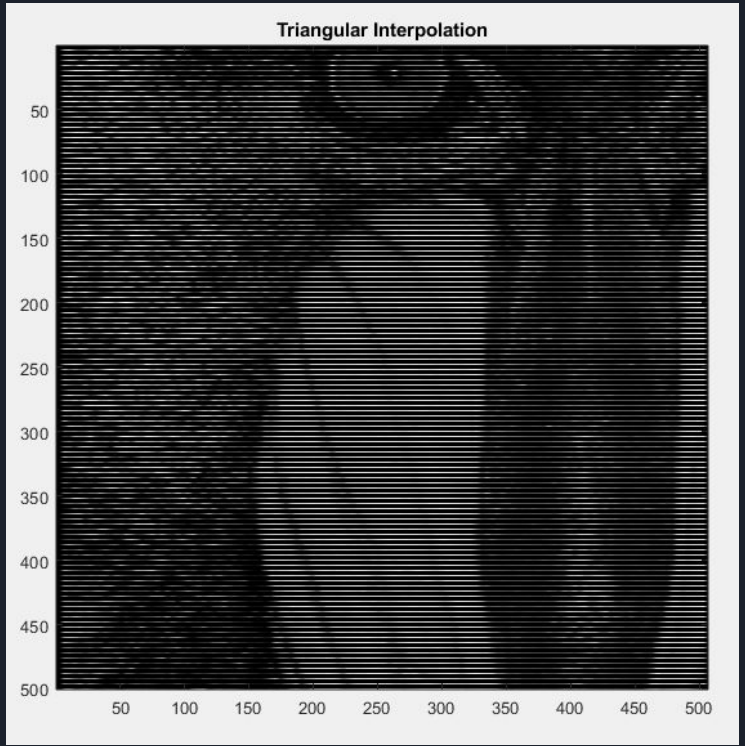
Zero based Interpolation

- Image was small so had to rescale to length
- 4 for every direction
- Sample : Period : M (or N) direction
- Allows for respacing and increasing size
- Overall matches size but has many holes



Triangular Interpolation

- Cuts the picture in pieces and aligns them together
- More coefficients = More smoothing
  More coefficients = Longer processing



Sinc Interpolation

- Sets clarity, but leaves blurring on edges.
- Is based on filtering, will have limited passed due to the parameters of the image