Lecture 3: Digital Image Fundamentals

Part 2: Resolution

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Notes:

- Sample images are available in both Matlab IPT *imdata* folder and *images* folder in the current directory. (You may need to add images folder into your path.)
- Related lecture: Lecture3 - Digital Image Fundamentals
- pdf versions of the .mlx files are also available for those using GNU Octave

```
% clear workspace variables and close windows
clc, clearvars, close all;
```

Effective spatial resolution

```
I = imread('football.jpg');
I1 = imresize(I, 0.5);
I2 = imresize(I1, 2);
imshowpair(I,I2,'montage');
```

Intensity Level Resolution

```
I = imread('cameraman.tif');
```

```
I1 = I/64;
max(I1(:))
```

```
ans = uint8

4
```

```
I2 = I/128;
max(I2(:))
```

```
ans = uint8

2
```

```
subplot(1,3,1)
imshow(I, [])
subplot(1,3,2)
imshow(I1,[])
subplot(1,3,3)
imshow(I2, [])
```