

# CMSC 426 - HW1

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## 1

### 1.1 My Region Props

#### 1.1.1 Area

```
%% Count number of pixels in blob
stats(count).Area = sum(sum(CurrBlob));
```

#### 1.1.2 Centroid

```
%% Find index of non-zero elements
[r, c] = find(CurrBlob);
n = size(r, 1);
%% Compute average of all non-zero pixel coordinates
stats(count).Centroid = [sum(c)/n, sum(r)/n];
```

### 1.1.3 Bounding Box

```
% Find index of non-zero elements
[r, c] = find(CurrBlob);
% Find bounds and add padding
maxCol = max(c) + 0.5;
minCol = min(c) - 0.5;
maxRow = max(r) + 0.5;
minRow = min(r) - 0.5;
stats(count).BoundingBox = [minCol, minRow, maxCol-minCol, maxRow-minRow];
```

## 1.2 Fill Holes

## 2