Code:

```
1  import numpy as np
2  import random
3  import cv2
4
5  def sp_noise(image,prob):
6  #Add salt and pepper noise to image
7  #prob: Probability of the noise
8      output = np.zeros(image.shape,np.uint8)
9      thres = 1 - prob
10     for i in range(image.shape[0]):
11         for j in range(image.shape[1]):
12             rdn = random.random()
13             if rdn < prob:
14                 output[i][j] = 0
15             elif rdn > thres:
16                 output[i][j] = 255
17             else:
18                 output[i][j] = image[i][j]
19     return output
20
21 image = cv2.imread('5_resize.jpg',0) # Only for grayscale image
22 noise_img = sp_noise(image,0.05)
23 cv2.imwrite('noise_5_1.jpg', noise_img)
```

Explanation:

I use OpenCV in python to add random noise.

Line11-18: The type of noise I choose is salt and pepper, which can be seen on the pictures as little black_or_white spots.

Line22: The probability of producing noises is 0.05, it is just the parameter I send in to sp_noise(image,prob) function.