

# Edge Detection

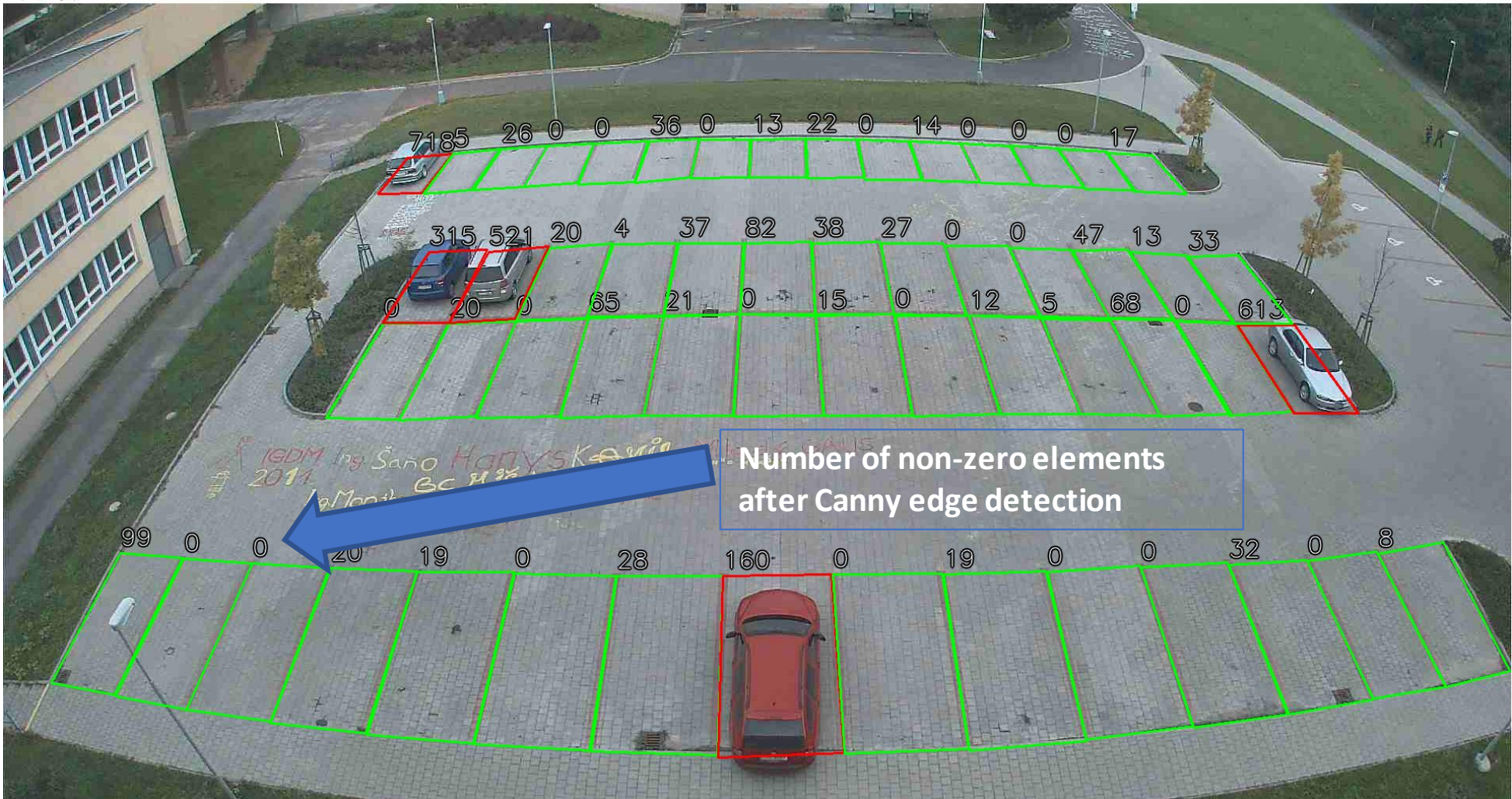
- **TASK – parking lot occupation detection**
- Continue with the template
- Try new testing images:
  - [http://mrl.cs.vsb.cz/data/vyuka/zao/parking/test\\_images\\_zao\\_24.zip](http://mrl.cs.vsb.cz/data/vyuka/zao/parking/test_images_zao_24.zip)
- Experiments with image filtering
- Experiments with the edge detectors:
  - Different thresholds
  - Sobel vs. Canny
  - Sobel vs. Canny vs. Template Match.
  - Hint: after edge detection, calculate non-zero elements of each place or create appropriate thresholds

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def main(argv):
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75     pkm_file = open('parking_map_python.txt', 'r')
76     pkm_lines = pkm_file.readlines()
77     pkm_coordinates = []
78
79     for line in pkm_lines:
80         st_line = line.strip()
81         sp_line = list(st_line.split(" "))
82         pkm_coordinates.append(sp_line)
83
84     test_images = [img for img in glob.glob("test_images_zao/*.jpg")]
85     test_images.sort()
86     temp = cv.imread("template.png")
87     size = (80, 80)
88     temp = cv.resize(temp, size)
89     cv.namedWindow("image_clone", 0)
90     cv.namedWindow("one_place_img", 0)
91     cv.namedWindow("temp", 0)
92     cv.namedWindow("source", 0)
93     n_park = 0
94     font = cv.FONT_HERSHEY_PLAIN
95     for img_name in test_images:
96         image = cv.imread(img_name)
97         image_clone = image.copy()
98         cv.imshow("image", image)
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100        for coord in pkm_coordinates:
101            n_park+=1
102            print("coord", coord)
103            pt_1 = (int(coord[0]), int(coord[1]))
104            pt_3 = (int(coord[4]), int(coord[5]))
105            center = ((pt_1[0]+pt_3[0])/2, (pt_1[1]+pt_3[1])/2)
106            one_place_img = four_point_transform(image, coord)
107            one_place_img = cv.resize(one_place_img, size)
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123     cv.imshow("image_clone", image_clone)
124     n_park = 0
125     cv.waitKey(0)
```

# Edge Detection

park\_image\_paint

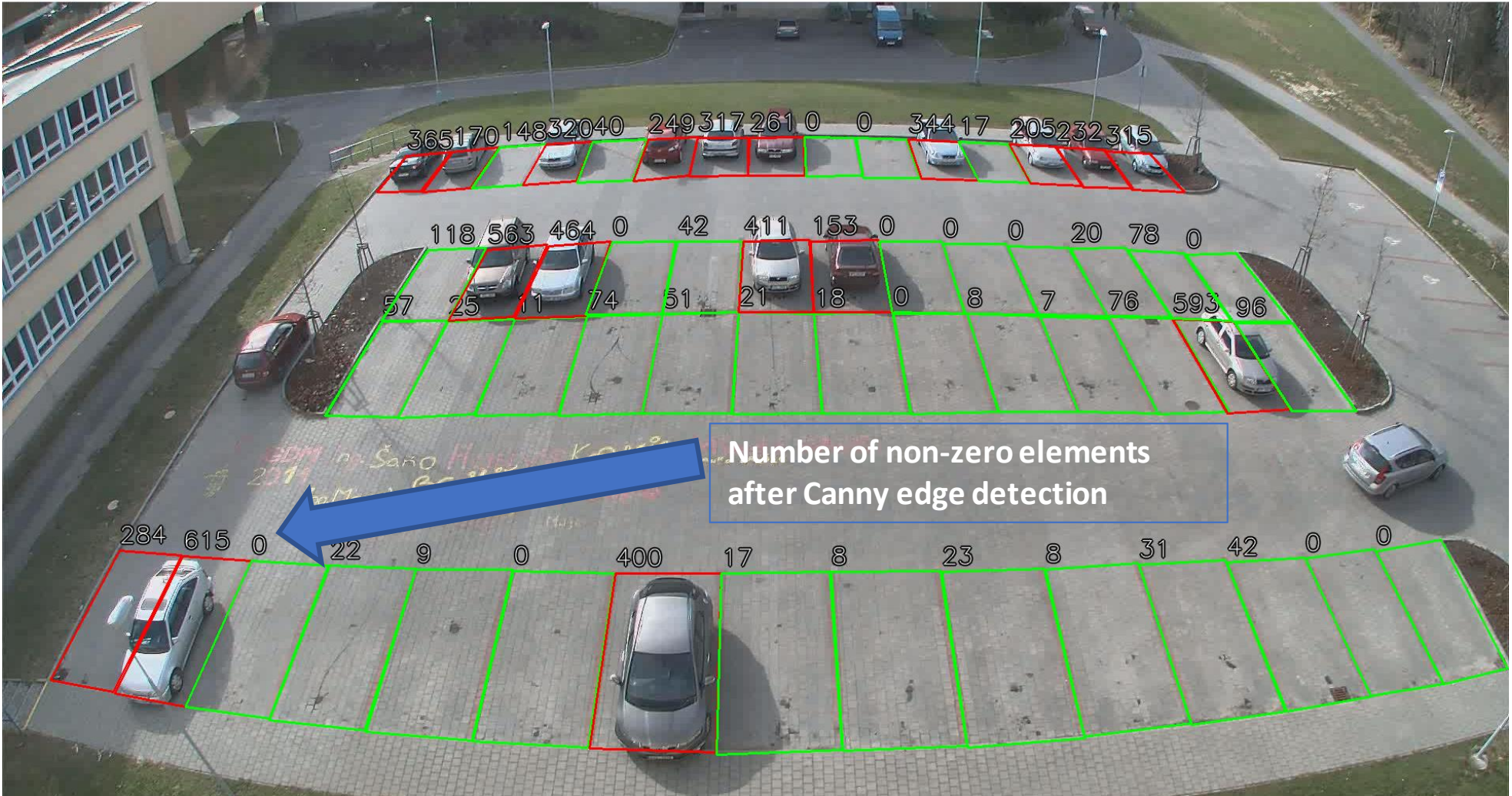
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# Edge Detection

park\_image\_paint





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