Papers

1.

Ross Girshick Jeff Donahue Trevor Darrell Jitendra Malik: Rich feature hierarchies for accurate object detection and semantic segmentation

[https://arxiv.org/pdf/1311.2524v5.pdf See [34](https://arxiv.org/pdf/1311.2524v5.pdf%20%20%20%20See%20%20%20%20%5b34)] for faster similar method

2.

Zhu, Levinso: Vision-based Reinforcement Learning for Robot Navigation, 2001

3.

[34] P. Sermanet, D. Eigen, X. Zhang, M. Mathieu, R. Fergus,

and Y. LeCun. OverFeat: Integrated Recognition, Localiza-

tion and Detection using Convolutional Networks. In

ICLR, 2014.

4.

B eh a vio u r-b a sed co n tro l : ex a m p les fr o m n a vig a tio n , lea rn in g ,

a n d g ro u p b eh a vio u r

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Mahadevan, S. and Connell, J. (1991) Automatic programming of behavior-based robots using reinforcement learning,

Blogg posts etc.

N. Markou. Black magic of deep learning – Tips and Tricks:

http://nmarkou.blogspot.no/2017/02/the-black-magic-of-deep-learning-tips.html

Video

1. <https://www.youtube.com/watch?v=9QRTg-4q634>

**Tensorflow and Raspberry Pi = Autonomous Self Driving RC Car**

I can tell you the basics, learn about CNNs and basic OpenCV techniques likes masking, edge detection and hough transform. You will get the idea. You can do it if you learn those basics. The idea is use the camera to get the pixels from the video and then use masks to remove unnecessary details from the video frames and then use edge detection and hough transform to detect the boundaries. and then start driving your car and record those video frames simultaneously. This is your training data. Drive the car in different variations like speed and cornering etc. Now use CNN to train the data. After training you can test by passing the real time video frames and it will work like a magic. This is the basic idea in very crude form. Actually you can do it in 2 weeks time. You would learn so much by doing it yourself. Have fun﻿