Line Following Algorithm

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1. Capture image

2. Colour filter?

3. Smoothing

4. Edge Detection[1]

   - Canny Edge detection
   - Edge Drawing[2]
   - Marr-Hildreth Edge detection
   - The Local Threshold and Boolean Function Based Edge Detection
   - Color Edge Detection Using Euclidean Distance and Vector Angle
   - Color Edge Detection using the Canny Operator
   - Depth Edge Detection using Multi-Flash Imaging

5. Edge thinning?

6. Ridge detection?

7. Line Segment Detection algorithms

   - Hough Line Transform
   - EDLines[3]

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[1] http://www.m-hikari.com/ams/ams-password-2008/ams-password29-32-2008/nadernejadAMS29-32-2008.pdf

[2] http://ceng.anadolu.edu.tr/CV/EdgeDrawing/

[3] http://ceng.anadolu.edu.tr/cv/EDLines/

- Minimum Partition Consistent Subsystems (MIN-PCS)[4]
- Line Segment Detector[5]
- On straight line detection [6]

8. Line Following

```
while ( detectLine() )
{
  // Align with the line
  // Move along the line by keeping the line in a virtual box and
  // making adjustments are made to flight direction if the line
  // direction changes
}
```

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[4]http://infoscience.epfl.ch/record/86864/files/Mattavelli2001_880.pdf
[5]http://www.ipol.im/pub/algo/gjmr_line_segment_detector/
[6]http://www.cmla.ens-cachan.fr/fileadmin/Documentation/Prepublications/
2007/CMLA2007-09.pdf