# EXERCISE 1: ROBUST ESTIMATION AND NORMS

GCT722 MATHEMATICAL METHODS FOR VISUAL COMPUTING  
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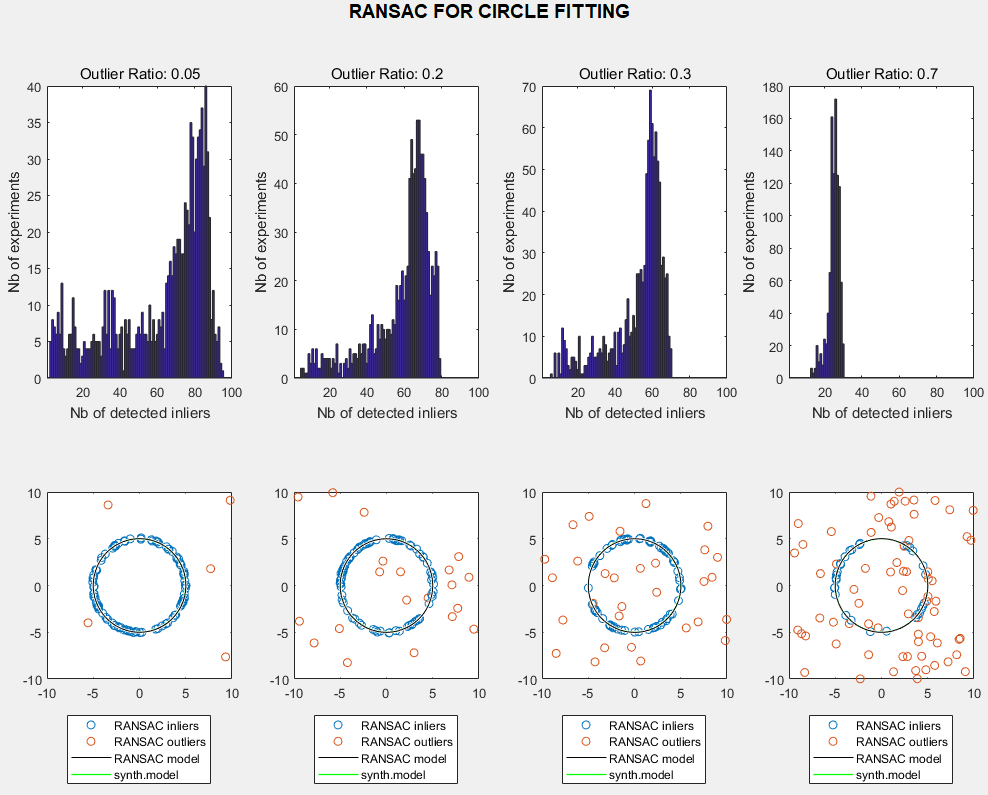
## PART 1: RANSAC FOR CIRCLE FITTING

**Description of implementation**

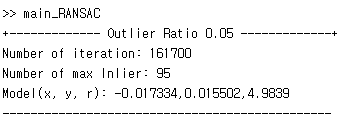
**Instructions for running**

1. Open the file “main\_RANSAC.m” in Matlab.
2. Execute that file.
   1. You can see the result of exhaustive search in command window.
   2. The another window that shows plots of RANSAC results is opened.

**Screenshots**



**Questions**

* How many combinations (exhaustive search) exist for N = 100 points?  
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* What about the number of RANSAC iterations with r = 5%, 20%, 30% and 70%?
* What about when N = 10,000 points?

**Discuss the results**

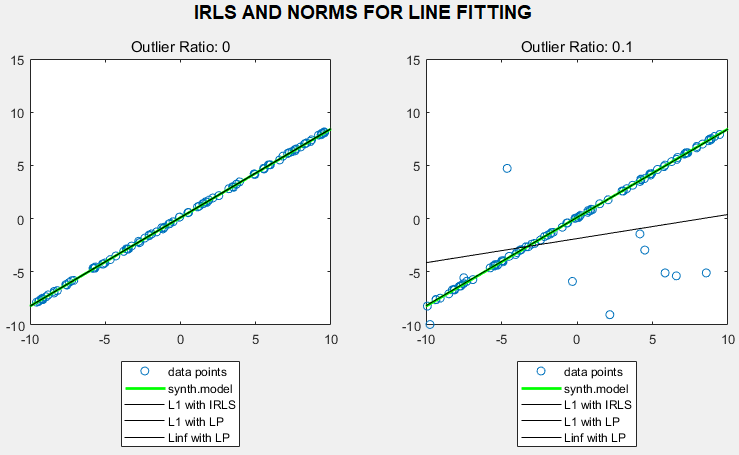
## PART 2: IRLS AND NORMS FOR LINE FITTING

**Description of implementation**

**Instructions for running**

1. Open the file “main\_LineFitting.m” in Matlab.
2. Execute that file
   1. The another window that shows plots of IRLS with and LP with  and  norms results is opened.

**Screenshots**



**Discuss the results**