## Homework 0: Getting Started

## Questionaire 1

- 1. Which of the following classes have you taken?
  - Linear algebra
  - Differential Calculus (Calc I)
  - Integral Calculus (Calc II)
  - Multivariate Calculus (Calc III)
- 2. What research topics are you interested in?
- 3. Have you ever used Matlab? How about R?

## $\mathbf{2}$ Starting with R

Lookup and read the R documentation for the following commands: c, seq, runif, plot, mean, var. Turn in a file named hw0.r that contains commands to do the following:

- 1. Create a vector k that contains the integers 1 through 100 in order.
- 2. Create a vector  $\mathbf{x}$  that contains the sequence  $0.01, 0.02, 0.03, \dots, 1.0$ .
- 3. Create a vector y that contains 100 uniform random numbers.
- 4. Plot x vs. y as a scatterplot.
- 5. Plot a histogram of y.
- 6. Compute the mean of y.
- 7. Compute the variance of y.

- Probability and Statistics
- Machine Learning
- Image Processing
- Computer Vision