EE 569 MATLAB Function Guidelines

The following are guidelines for students programming homework solutions with MATLAB, which are given for two main reasons:

(1) Students using C/C++ should not have any disadvantages just because they are using lower level programming language. In other words, we need to be fair to all students whether they are using Matlab or C/C++.
(2) You will learn more about image processing by implementing more fundamental functions by hand, rather than relying on already written code.

The function list in MATLAB documents is separated into two parts: the default set of commands and the commands within toolboxes. The default set of commands are categorized to 7 groups:

(1) Tools
(2) Mathematics
(3) Programming
(4) Graphics
(5) 3D Visualization
(6) User Interface
(7) External Interface

Using functions in 1-7, except for 2, is fine, EXCEPT hist(). Regarding functions in 2, as long as a matrix structure is involved, such functions are NOT allowed, because there is no concept of matrix operations in C/C++. For example, if you want to add matrix A and B, instead of writing a Matlab code A+B, please invoke a "for" loop to add up each component, as this is what students programming in C/C++ must do.

Commands from the toolboxes are not allowed for this class.

However, there are some cases when some important functions in Matlab have no equivalence in C/C++, and are irreplaceable. For example, memory allocation is dealt with differently from C/C++, so some functions, such as size() or length() or sort(), are inevitable and irreplaceable. For this reason, you are allowed to use these functions.