








# Overview

## DESCRIPTION

This toolbox is meant to facilitate the manipulation of images and video in Matlab. Its purpose is to complement, not replace, Matlab's Image Processing Toolbox, and in fact it requires that the Matlab Image Toolbox be installed. Emphasis has been placed on code efficiency and code reuse. Thanks to everyone who has given me feedback - you've helped make this toolbox more useful and easier to use.

## CONTENTS

The toolbox is divided into 7 parts, arranged by directory:

-  **channels** Robust image features, including HOG, for fast object detection.
-  **classify** Fast clustering, random ferns, RBF functions, PCA, etc.
-  **detector** Aggregate Channel Features (ACF) object detection code.
-  **filters** Routines for filtering images.
-  **images** Routines for manipulating and displaying images.
-  **matlab** General Matlab functions that should have been a part of Matlab.
-  **videos** Routines for annotating and displaying videos.

## DOWNLOAD

For version history click [here](#). This code is licensed under the [Simplified BSD License](#).

- **Recommended:** download the latest version from [GitHub](#)
- [Version 3.50](#) May 12, 2016
- [Version 3.00](#) Aug. 06, 2012
- [Version 2.00](#) Sep. 30, 2007
- [Version 1.03](#) May. 03, 2006 [compatible with cuboids code]
- [Version 1.00](#) Oct. 02, 2005

Requires Matlab 2011b or later and Matlab's Image Processing Toolbox.

## INSTALL

**Simply unzip, then add all directories to the Matlab path:**

```
>> addpath(genpath('path/to/toolbox/')); savepath;
```

If needed, run the compile script for the mex files:

```
>> toolboxCompile;
```

Note: 64 bit Windows/Linux/Mac binaries are already included.

## CITE

**If you use use this code in a publication, I would be grateful if you cite:**

```
@misc{PMT,  
  author = {Piotr Doll'ar},  
  title = {{P}iotr's {C}omputer {V}ision {M}atlab {T}oolbox ({PMT})},  
  howpublished = {\url{https://github.com/pdollar/toolbox}}  
}
```

Use of [channels](#) and [detector](#) packages requires separate citations.