

# Neuroconductor Cheatsheet v2.0

Based on the template from  
[http://github.com/wzchen/probability\\_cheatsheet](http://github.com/wzchen/probability_cheatsheet).

Last Updated April 11, 2017

## Image Objects

- `nifti` (*oro.nifti*) - 3D array with header information, data in memory
- `antsImage` (*ANTsR*) - C++ pointer, not in memory
- `niftiImage` (*RNifti*) - C++ pointer, not in memory

## Image Manipulation

- Comparison Operators: `>`, `>=`, `<`, `<=`, `==`, `!=`, returns a Logical image
- Arithmetic: `+`, `-`, `*`, `/`, returns a Numeric image
- In operator: `%in%`, returns a Logical vector

## Image Conversion

How to convert `to nifti` objects from:

Type	function	Description
<code>antsImage</code>	<code>extrantsr::ants2oro</code>	Writes out image, reads in as a <code>nifti</code>
<code>antsImage</code>	<code>extrantsr::ants2oro(aimg, reference = aimg)</code>	Uses the <code>aimg</code> <code>nifti</code> object as header, faster
<code>niftiImage</code>	<code>oro.nifti::nii2oro(aimg)</code>	Extracts <code>aimg</code> array, then copies header to <code>nifti</code> object

## Multiplication Rule