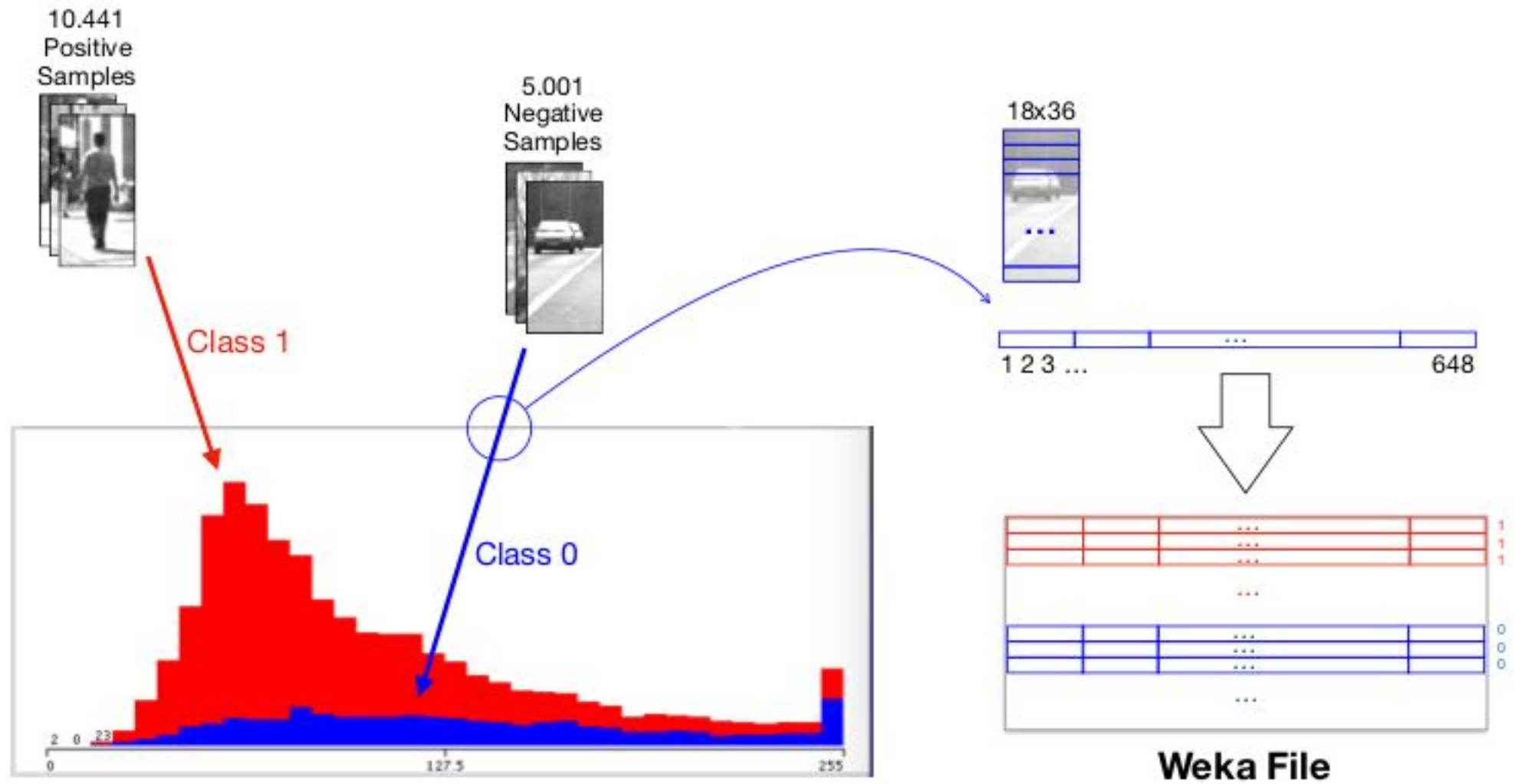
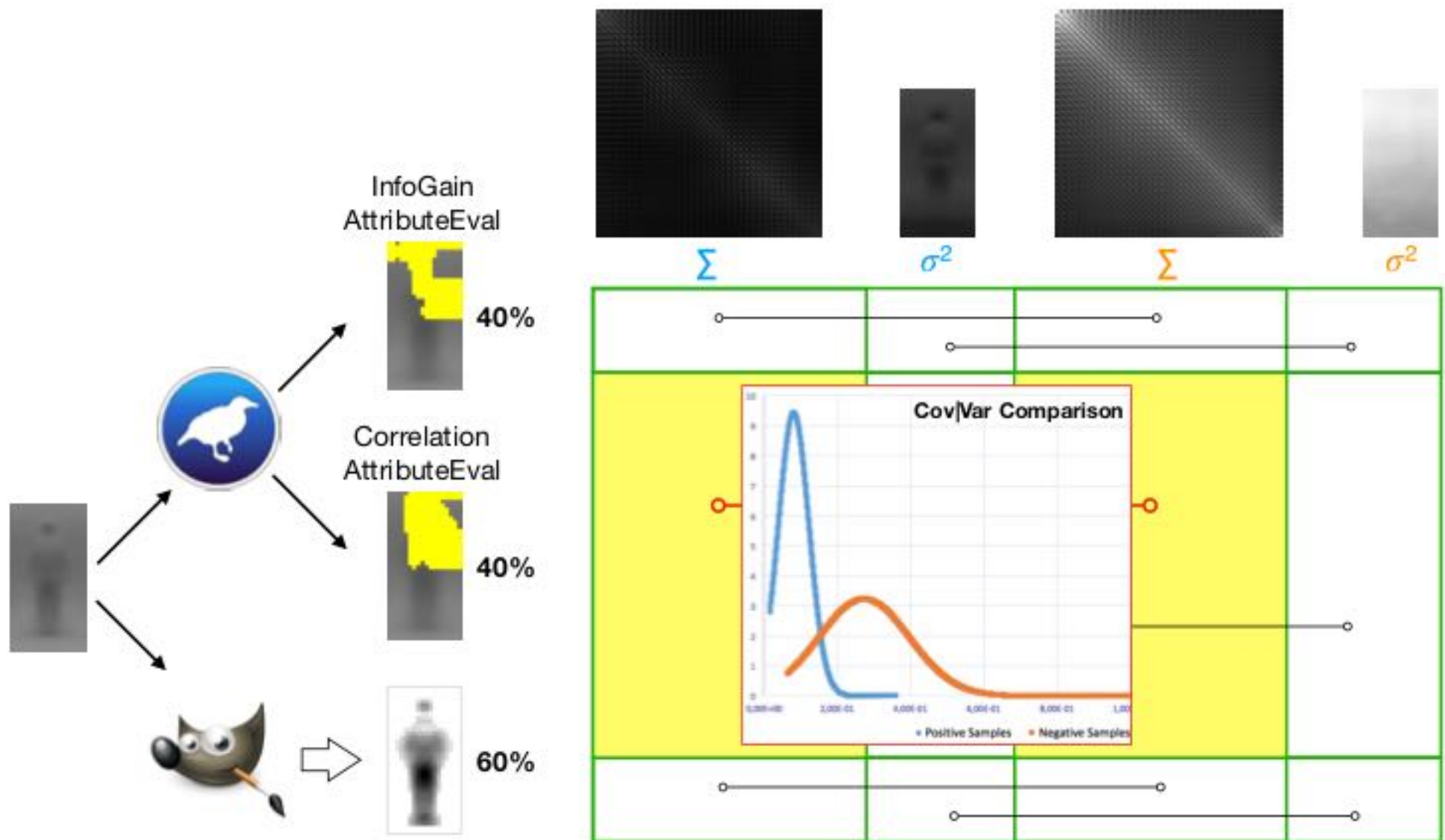


## Pixels/Features Selection



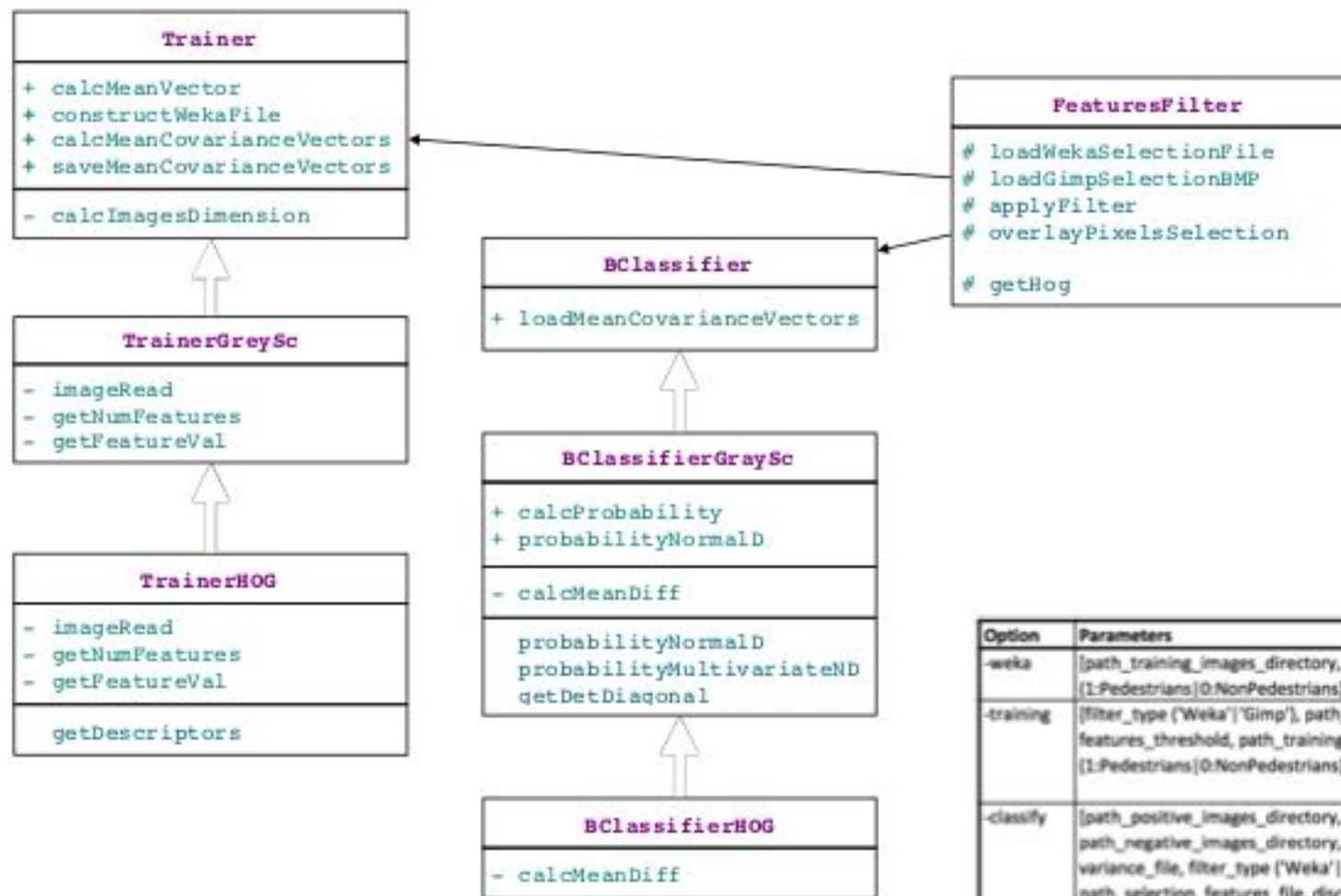
Group #23 - WS17/18

# Pixels/Features Selection





## Program Design

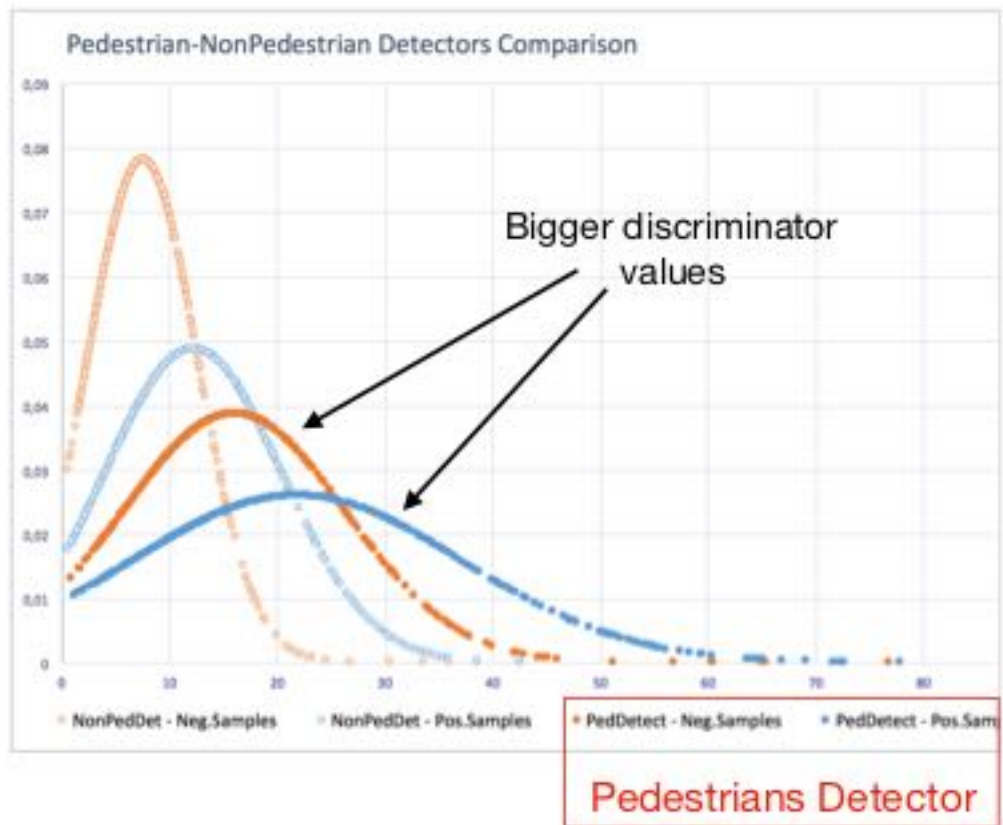


Option	Parameters	Description
-weka	[path_training_images_directory, class_id (1:Pedestrians 0:NonPedestrians), alias ('GraySc' 'HOG')]	Constructs an .arff file corresponding to the Class to be analyzed in Weka.
-training	[filter_type ('Weka' 'Gimp'), path_selection_features_file, features_threshold, path_training_images_directory, class_id (1:Pedestrians 0:NonPedestrians), alias ('GraySc' 'HOG')]	Loads the Weka or Gimp selection file and calcs the Mean and Covariance matrices, to save finally these in BMP an XML formats.
-classify	[path_positive_images_directory, path_negative_images_directory, path_mean_file, path_covariance_file, filter_type ('Weka' 'Gimp'), path_selection_features_file, discriminator_threshold, size_group_samples, alias ('GraySc' 'HOG'), gaussian_type ('Multi' 'Mono')]	Creates the Transition Matrix testing the Classifier with sets of given group size images.
-discrimins	[path_positive_images_directory, path_negative_images_directory, path_mean_file, path_covariance_file, filter_type ('Weka' 'Gimp'), path_selection_features_file, alias ('GraySc' 'HOG'), gaussian_type ('Multi' 'Mono')]	Calcs all the Discriminators from to the images given in the samples directory.

# Test and Results

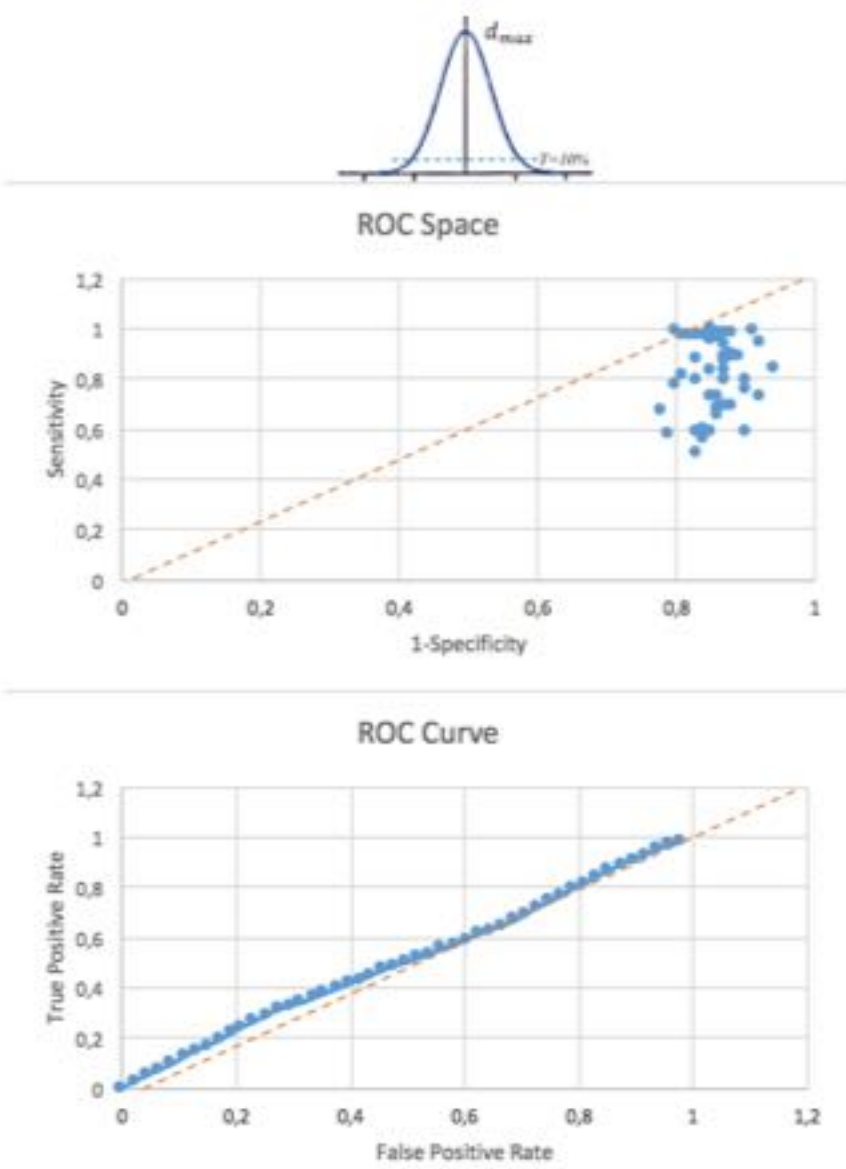
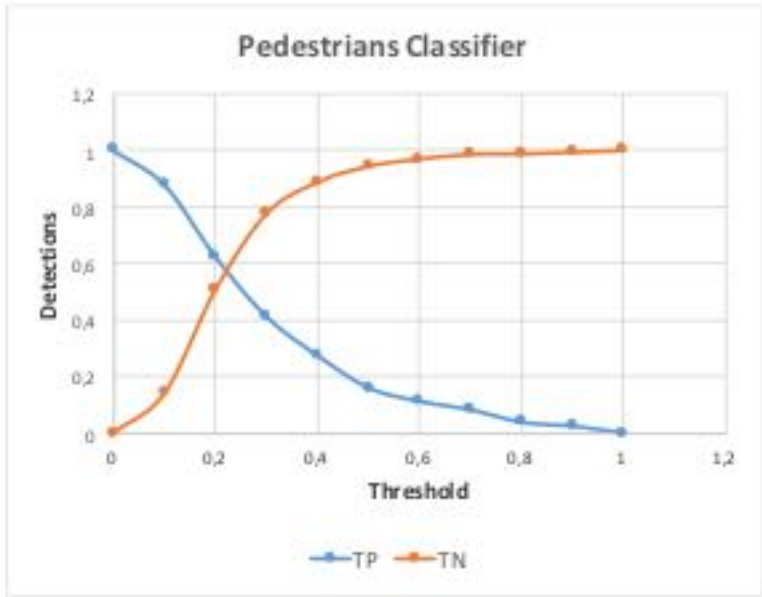
$$p(\mathbf{x}) = \frac{1}{(2\pi)^{d/2}|\Sigma|^{1/2}} \exp \left[ -\frac{1}{2}(\mathbf{x} - \mu)^t \Sigma^{-1}(\mathbf{x} - \mu) \right]$$

Discriminator



# Test and Results

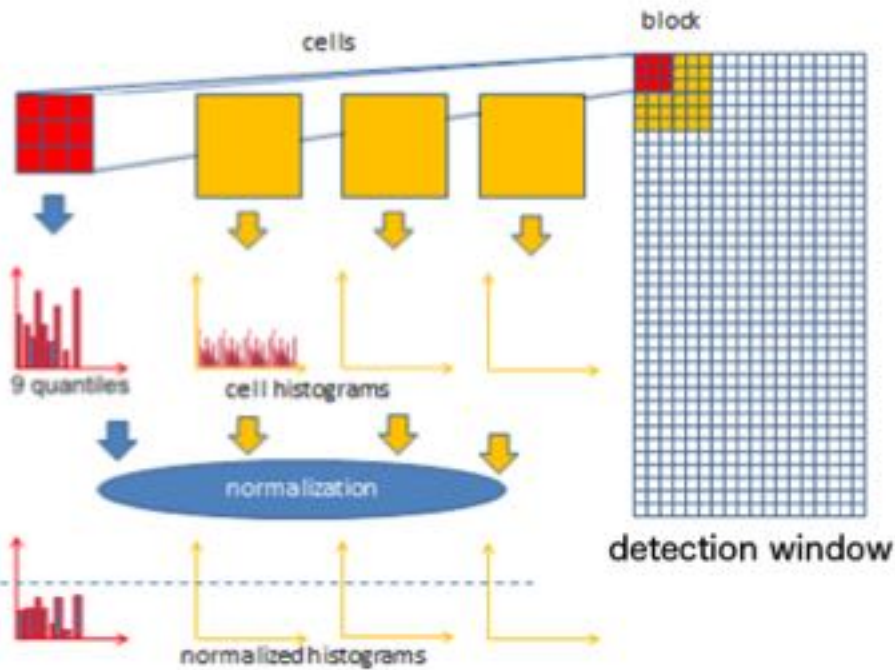
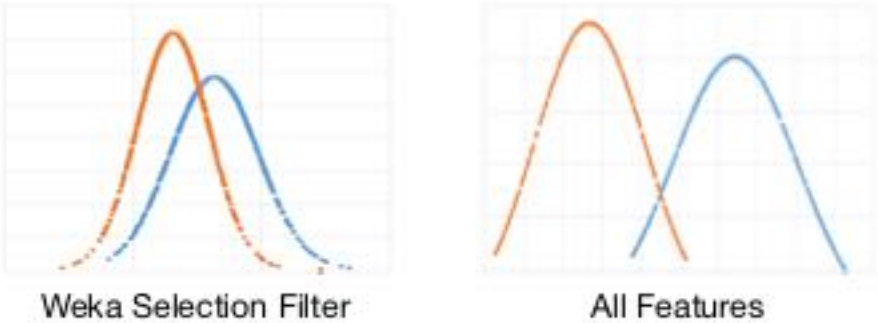
## Grey Scale Values





# Test and Results

Discriminators Distribution



HOG Features

