

Assignment 2: Mini project

Environmental monitoring from satellite

Toke Frederiksen

October 27, 2018

1 Mr X's potatoes

Part 1a

The given data is presented as an RGB image in figure **FIGUREEKJDEKJDEJK**. The Ihh intensity was used as the red channel, Ihv as green and Ivv as blue. Further the values are presented in dB and have been con

ned to values between 0 and 1. The MATLAB code can be found in assignment2 1.m, part 1a. The ground truth map is presented in figure **IFURIREG**, in colours according to the corresponding colour map. It shows the class of each pixel by its colour code.

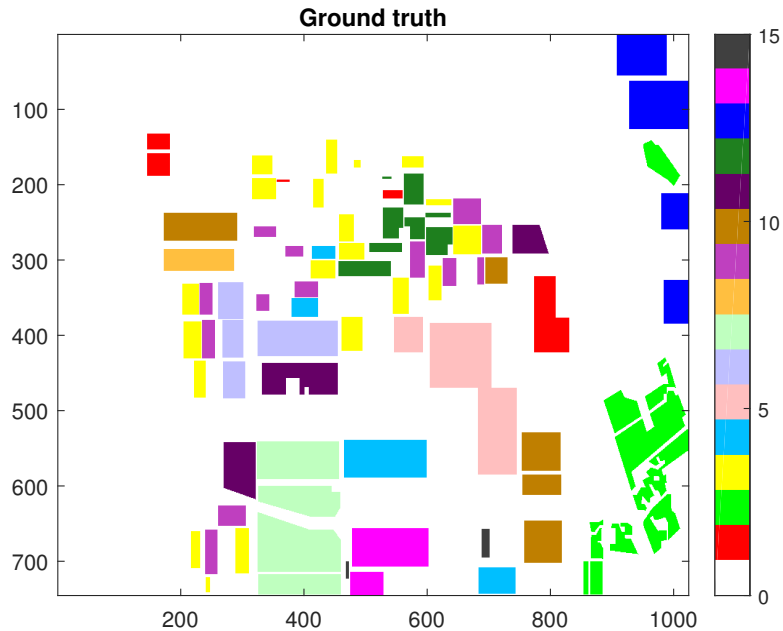


Figure 1: text

Part 1b

The code for this part can be found in `splitData.m` and `assignment2_1.m`. *The data, ie. each class from 1–15, is split into 60% test set and 40% training set. It is done by a random permutation of the pixels in each class, and then*

Part 1c

A histogram of the I_{HH} , I_{HV} and I_{VV} channel for all pixels in class 5 (potato) is shown in figure **REFEFE**, along with the gamma function for the respective channel. As seen from the figure, the gamma function describes the histogram well, except for the I_{HV} channel.