

**Introduction to Computer Vision**

**Coursework**

**Submission 2**

**Your name \_\_\_\_\_\_\_\_ HAO BAI \_\_\_\_\_\_\_\_**

**Student number \_\_\_\_\_\_\_\_201218765\_\_\_\_\_\_\_\_\_\_**

**Question 4(a)**

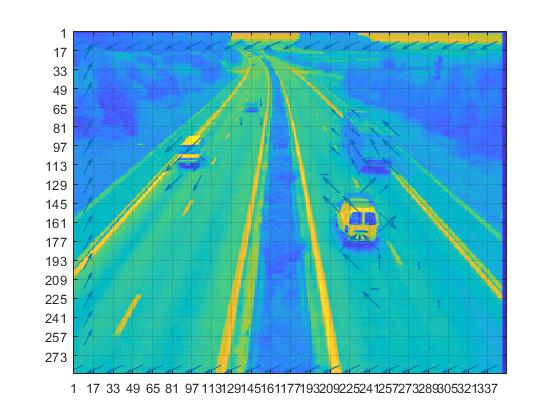
It+1



It



Motion field of It+1



**Question 4(b)**

Pt+1



It+1

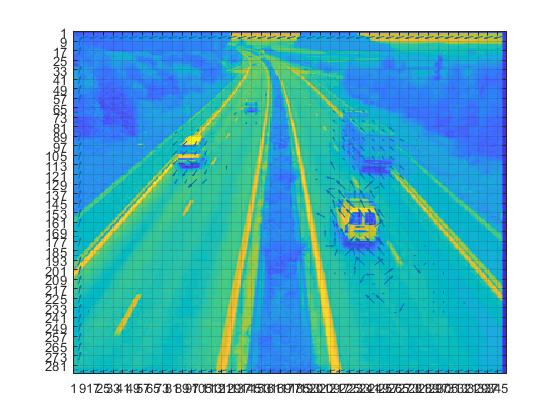


**Your comments**

**Question 4(c)**

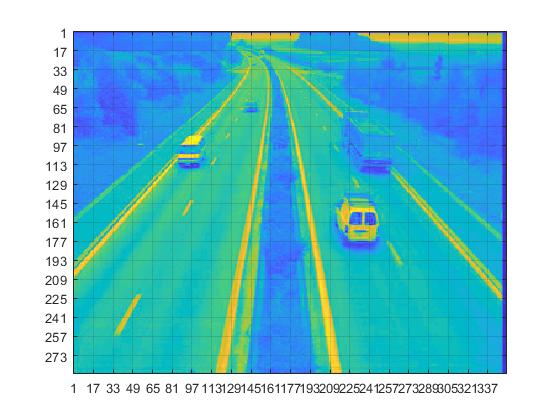
Pt+1

Block size = 8x8



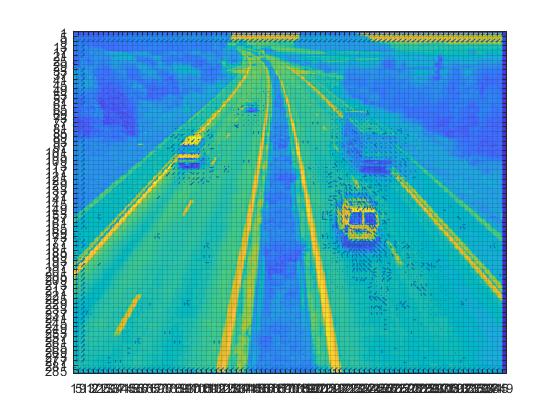
Pt+1

Block size = 16x16



Pt+1

Block size = 4x4

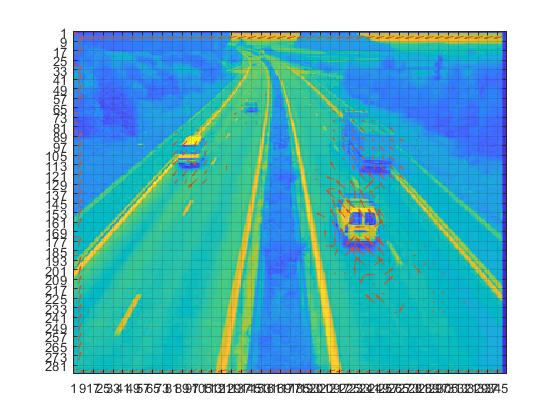


**Your comments:**

**Question 4(d)**

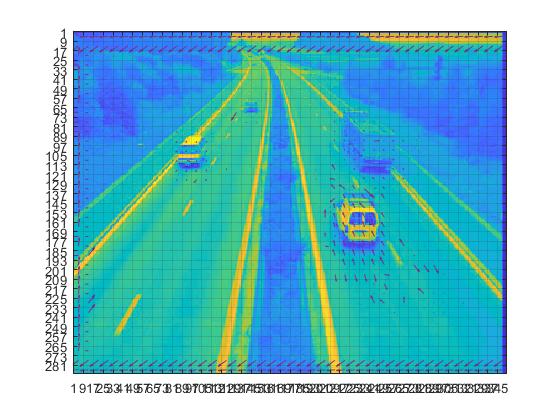
Pt+1

Window size = 16x16



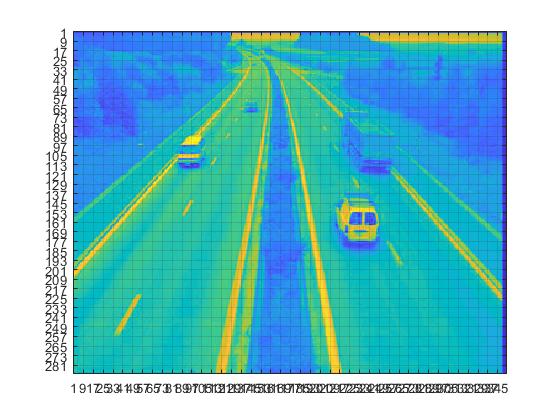
Pt+1

Window size = 32x32



Pt+1

Window size = 8x8



**Your comments:**

**Question 4(e)**

**Plot graphs:**

Time versus window size

Time versus block size

**Your comments:**

**Question 5(a)**

**Original frames:**

Selected frame 2



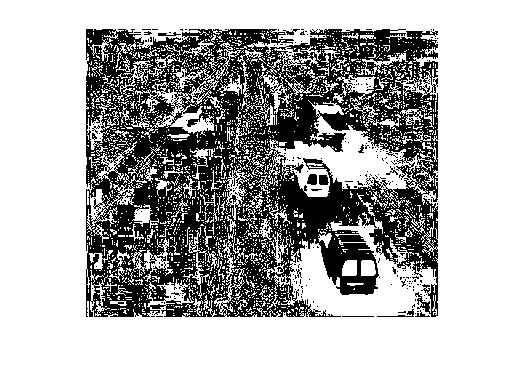
Selected frame 1

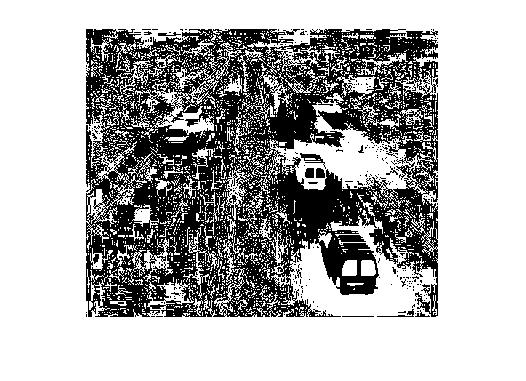


Reference frame

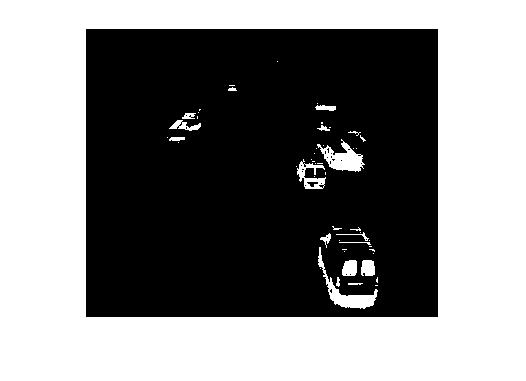


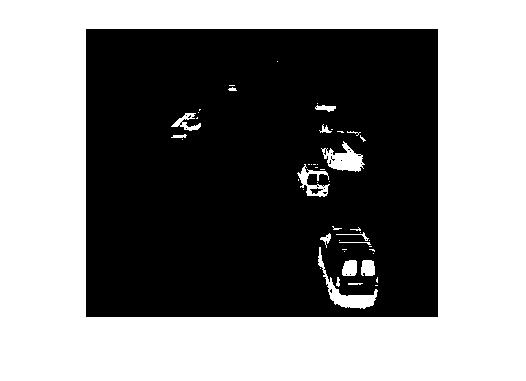
**Frame differencing:**





**Threshold results:**





**Your comments:**

**Threshold = 40**

**Question 5(b)**

**Original frame:**

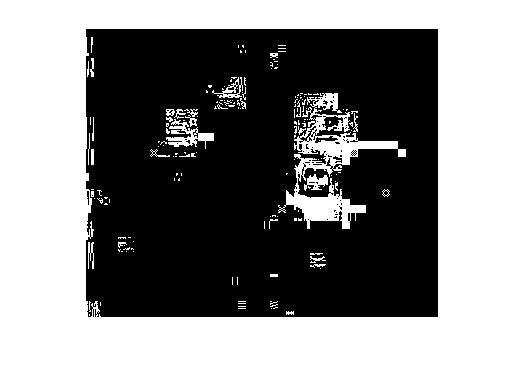
Selected frame 1

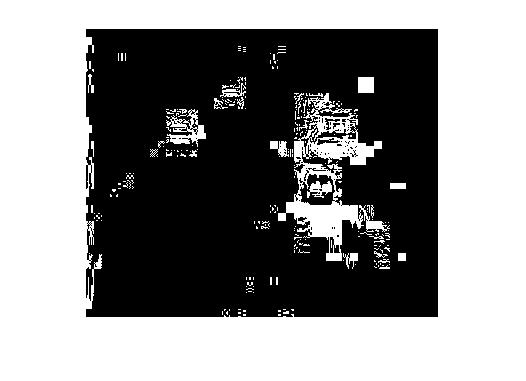


Selected frame 2

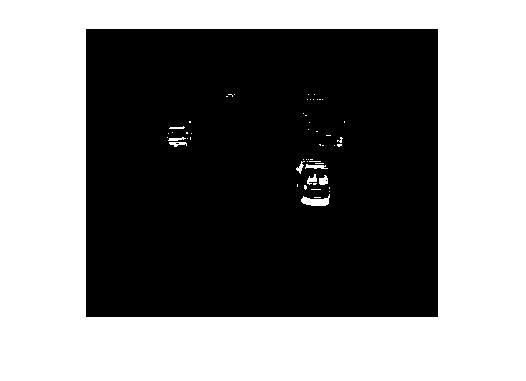


**Frame differencing:**





**Threshold results:**





**Your comments for 5a,5b:**

**Question 5(c)**

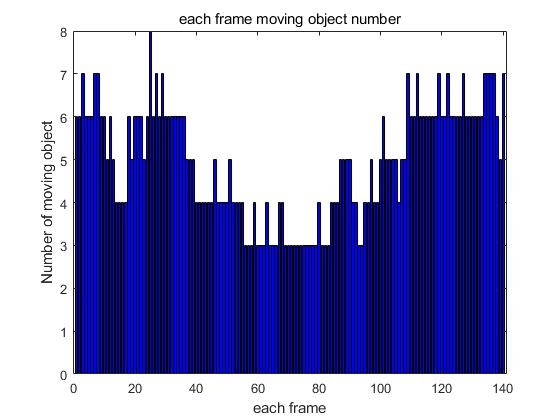
Generated background



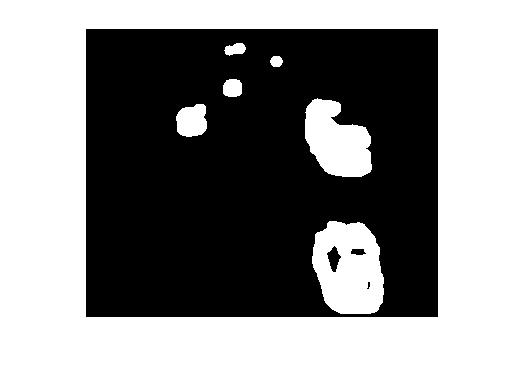
**Your comments:**

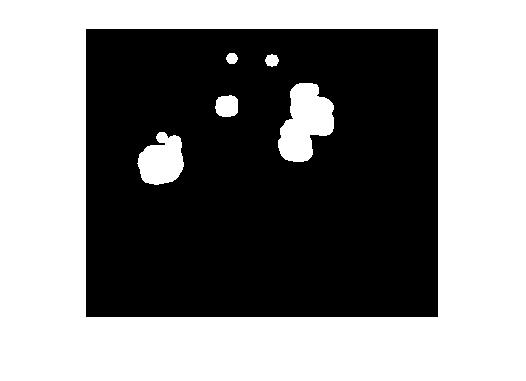
**Question 5(d)**

Bar plot



**Your comments:**

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**Question 6(a)**

**Three non-consecutive windows**

W3



W2

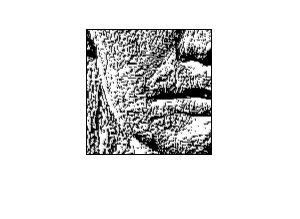


W1

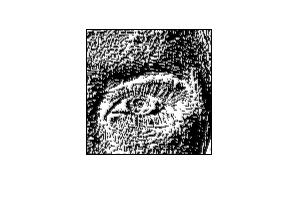


**LBP of windows**

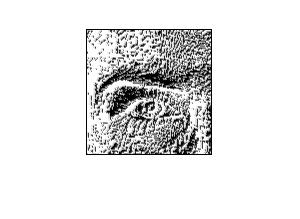
LBP3



LBP2



LBP1



**Histograms of LBPs**

H3

H2

H1

**Question 6(b)**

**Two example images:**

Car image

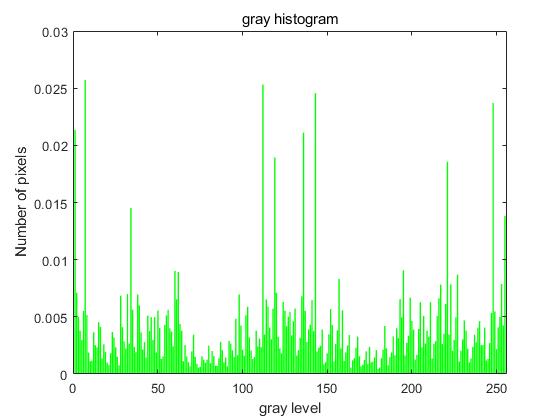


Face image

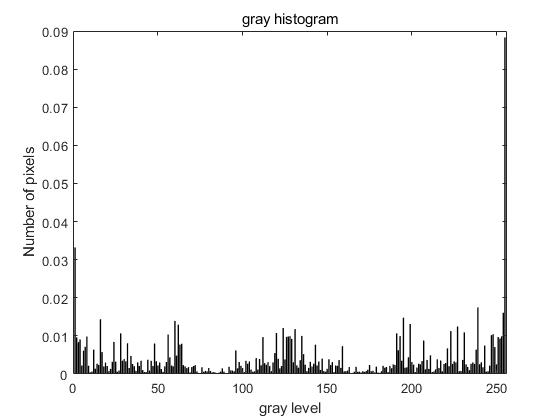


**Descriptors:**

Car descriptor



Face descriptor



**Your comments:**

**Question 6(c)**

**Block diagram of classification process**

**Your comments:**

**Question 6(d)**

**Your comments:**

**Question 6(e)**

**Your comments:**

**Question 6(f)**

**Your comments**