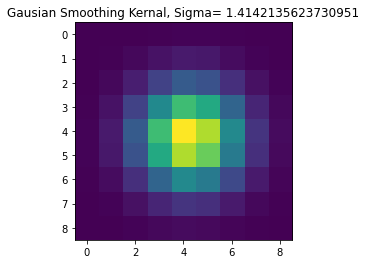
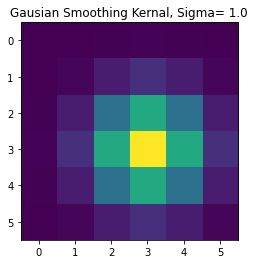
# Machine Vision – Assignment 1 (Feature Points and Descriptors)

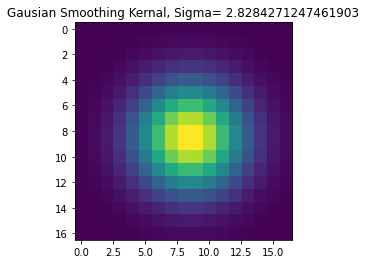
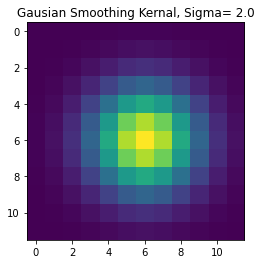
Name: Shane Quinn Date: 19/03/2021

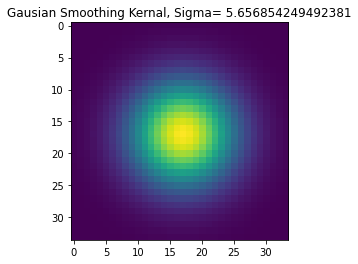
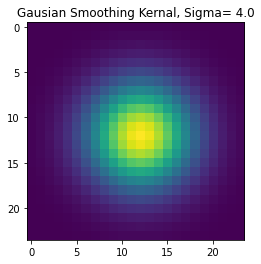
Student Number: R00144107

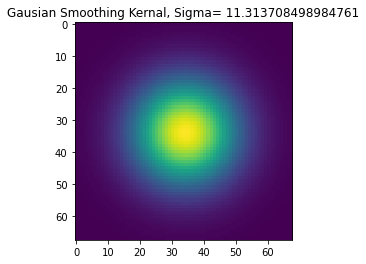
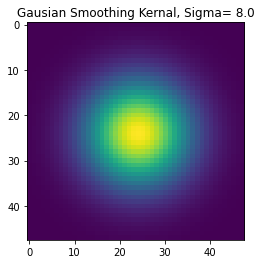
## Task 1 (Scale Space)

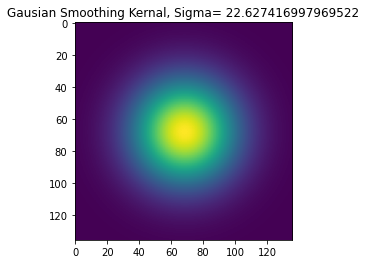
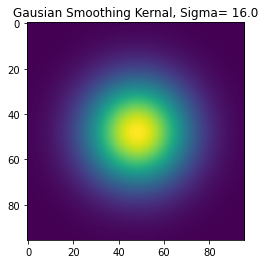
### Part b – Gaussian Smoothing Kernels (Line 68)

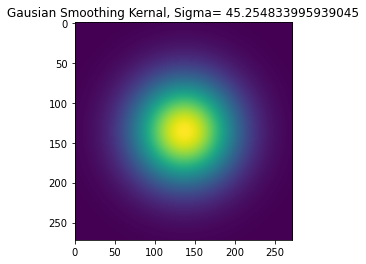
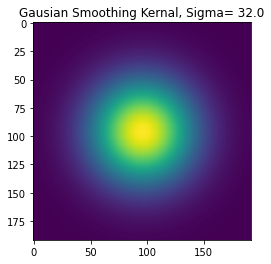












### Part b – Scale Space Images (Line 65)



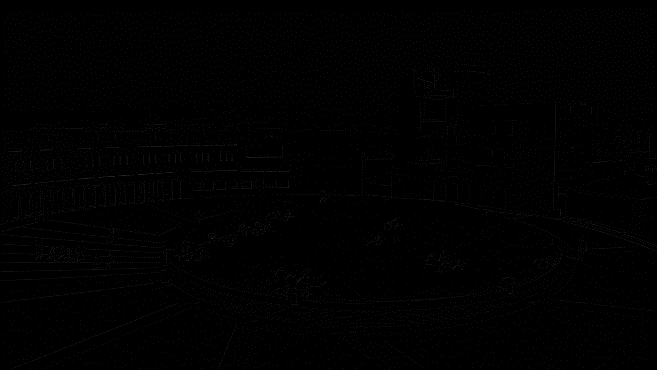
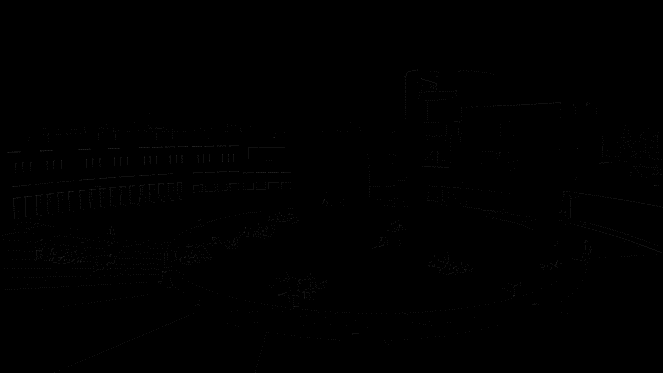
 

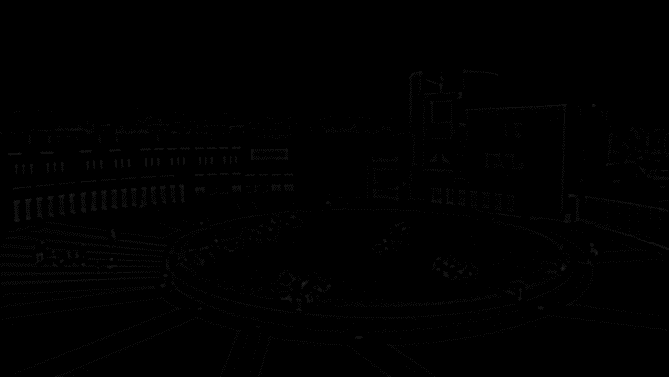
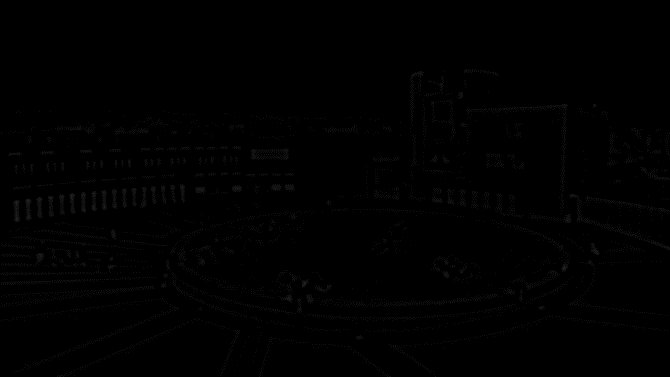
 

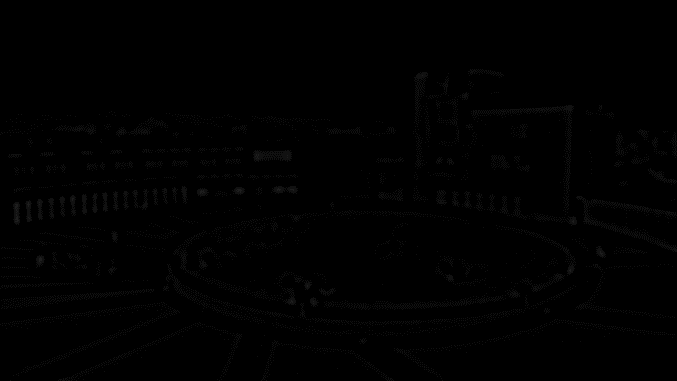
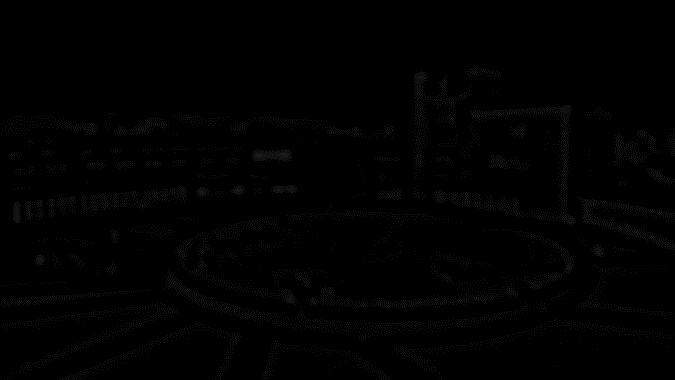
### Task 2 (Feature Point Locations)

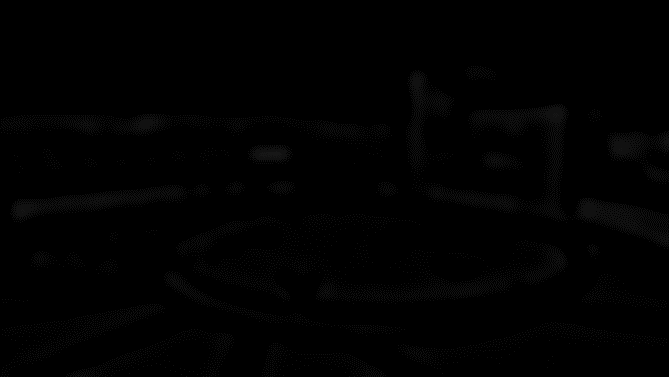
### Part A – Difference of Gaussians (Line 108)

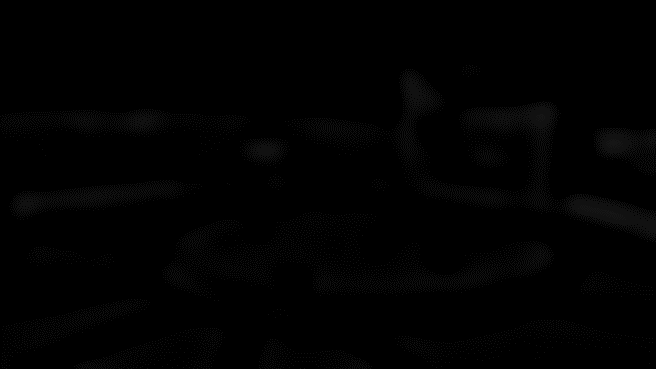
 



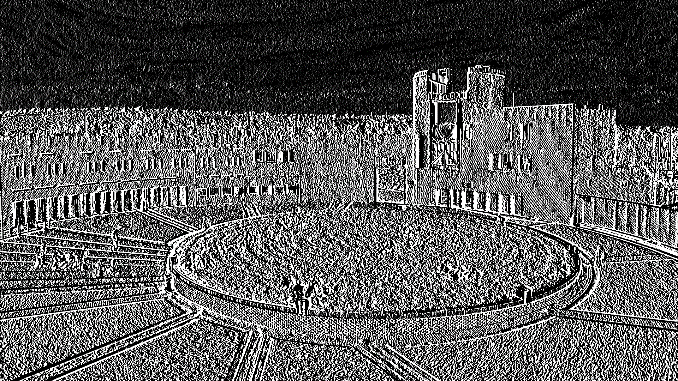
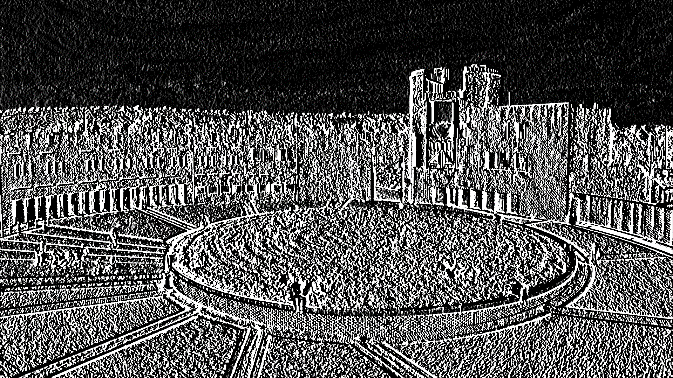
### Part C – Visualize Key Points (Line 150)

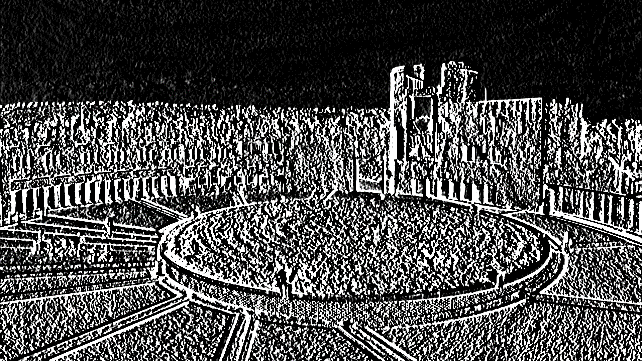
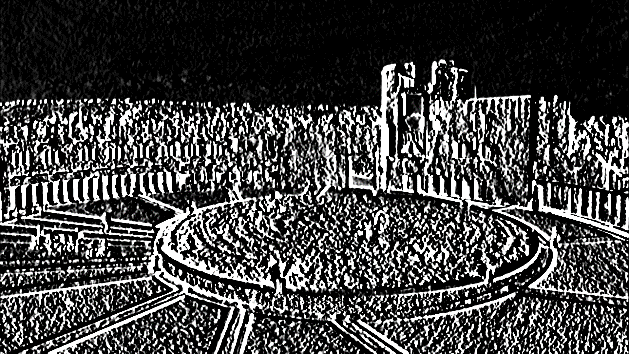


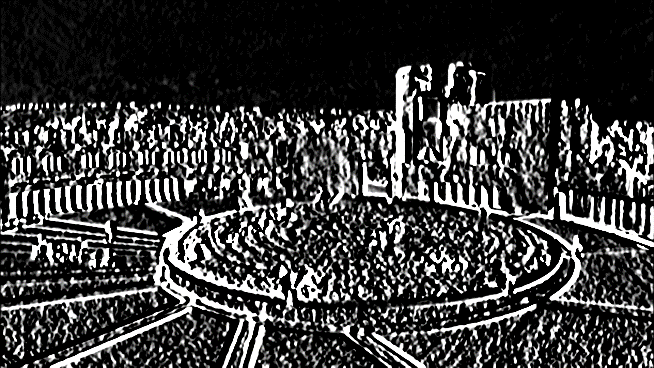
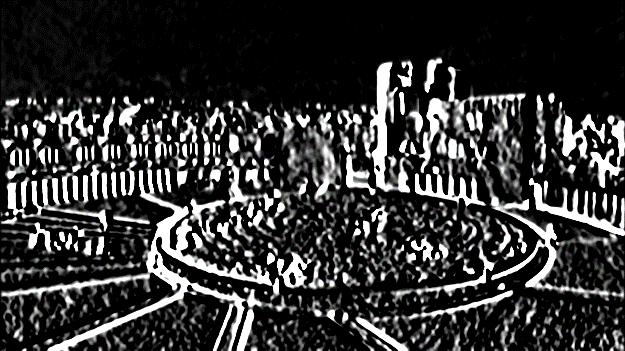
### Task 3 (Feature Point Orientations)

### Part A – Derivatives of Scale Space Images (Line 242 - 243)

Derivative of Gaussian X (Increasing Sigma values from 1 – 45)

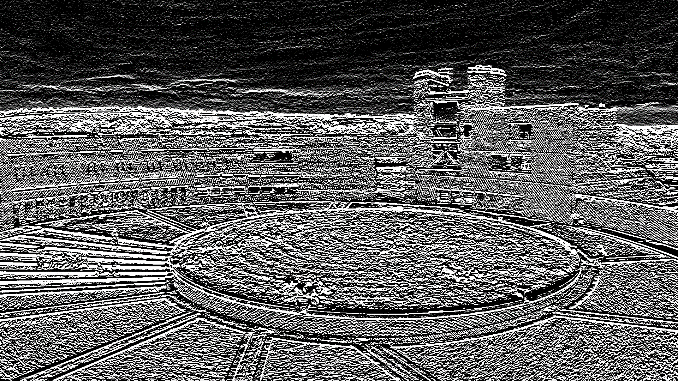
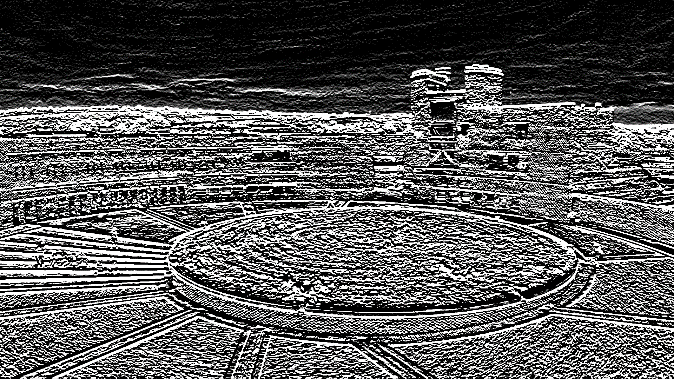
 

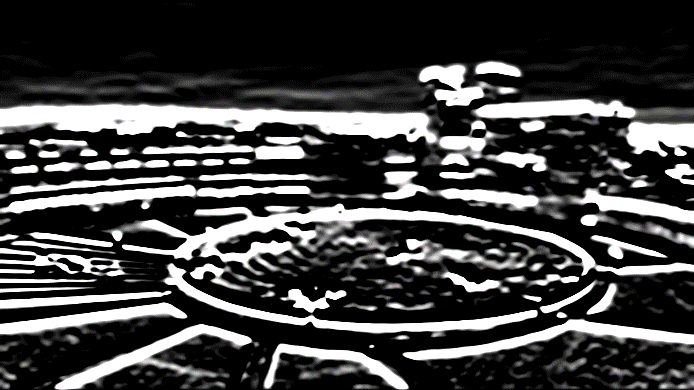
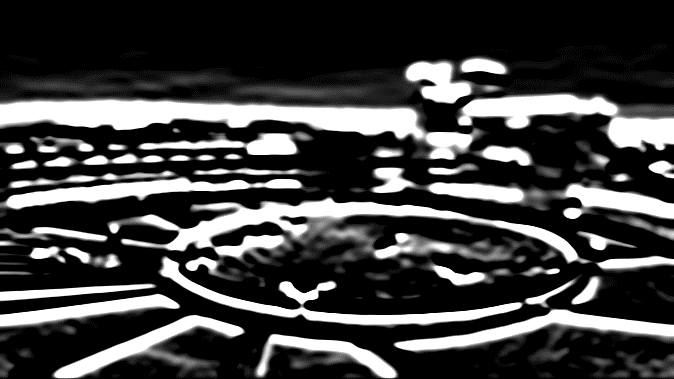


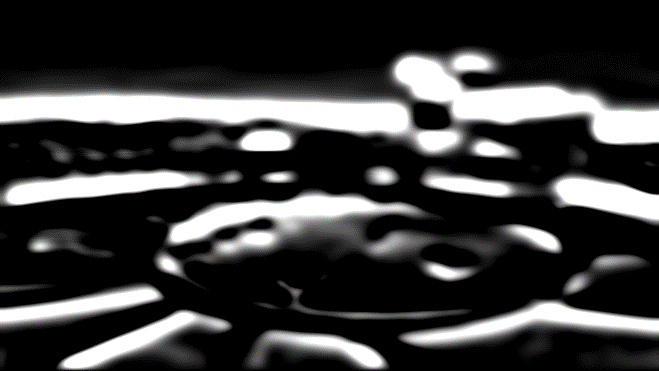
Derivative of Gaussian Y (Increasing Sigma values from 1 – 45)



### Part A – Key Points with Dominant Orientations (Line 324)

