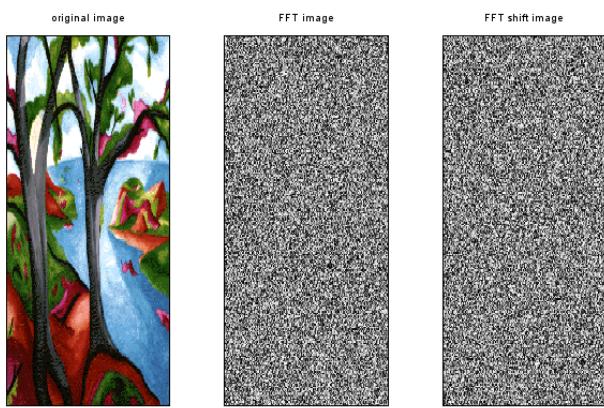


Image Processing and Machine Vision

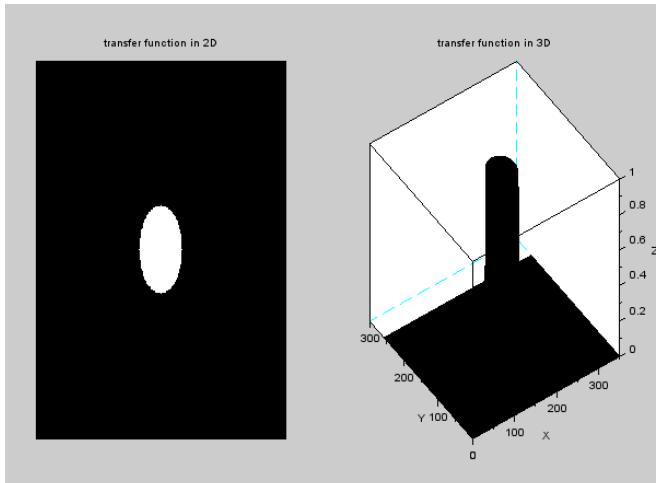
Frequency Domain Filters

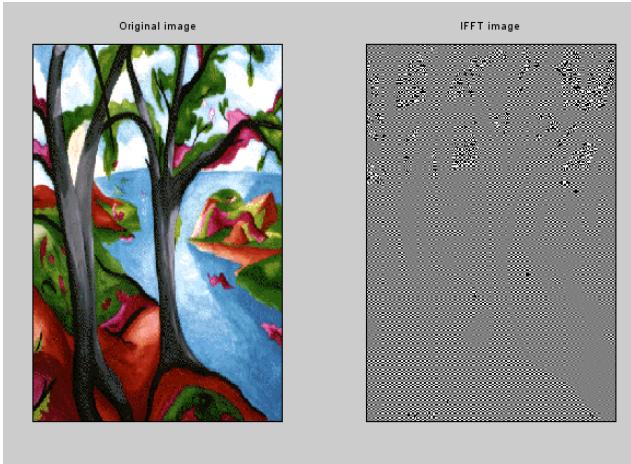
1) Ideal Filters

Output:

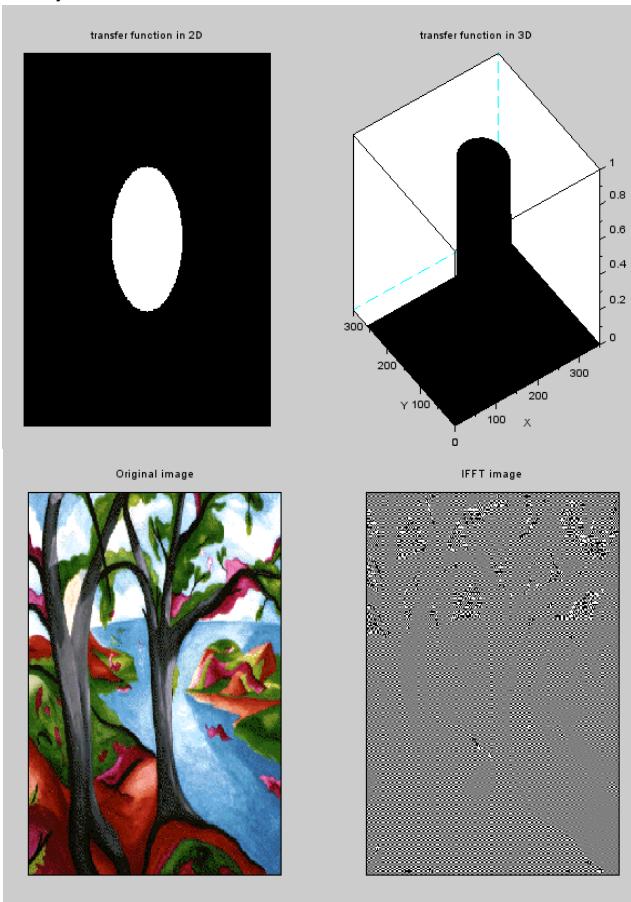


1) When $d=30$

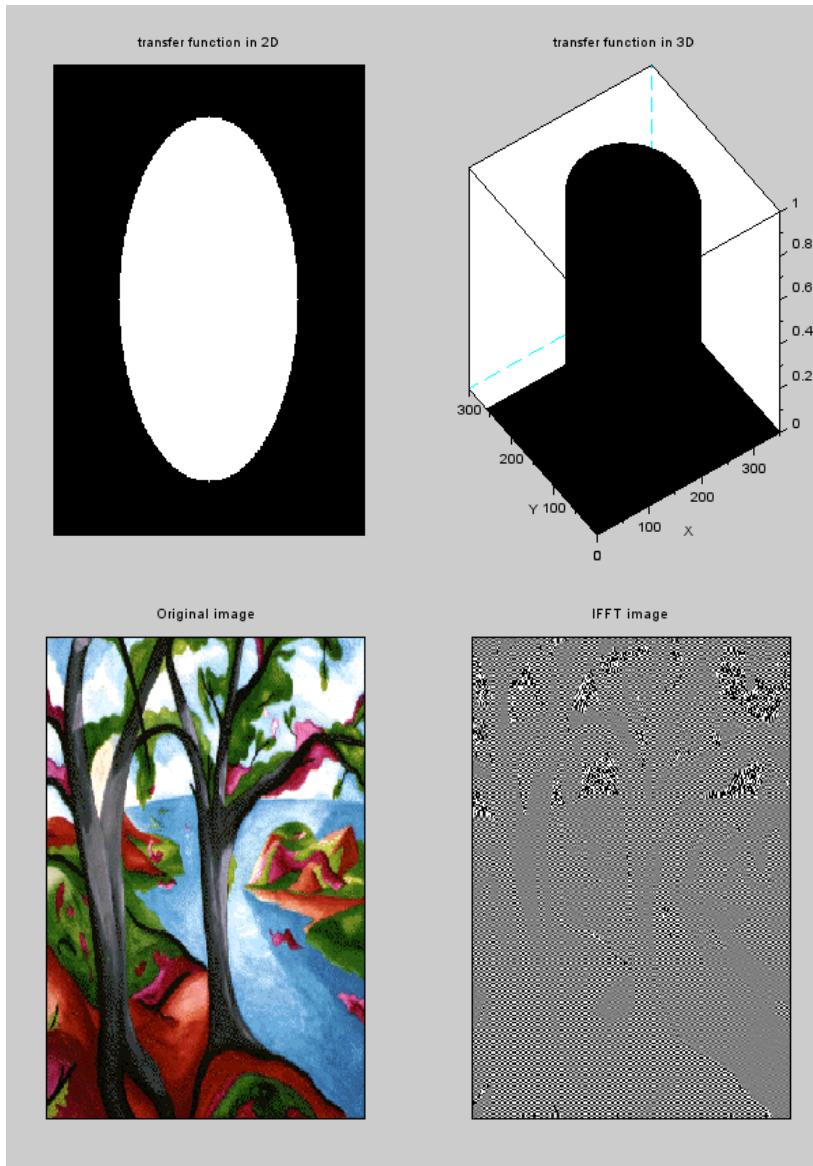




2) When $D=50$

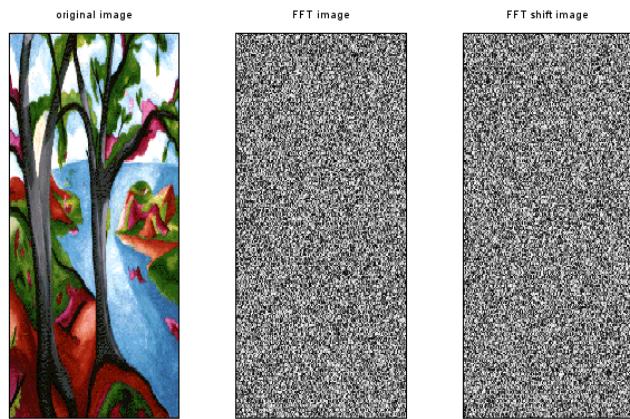


3) When $D=100$

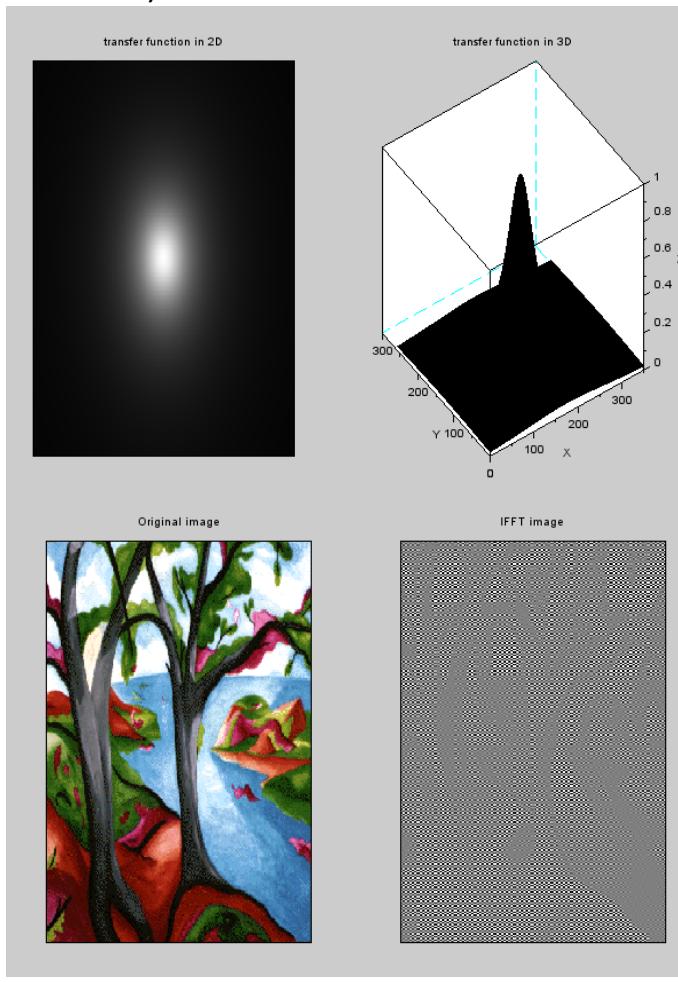


2) Butterworth Filter:

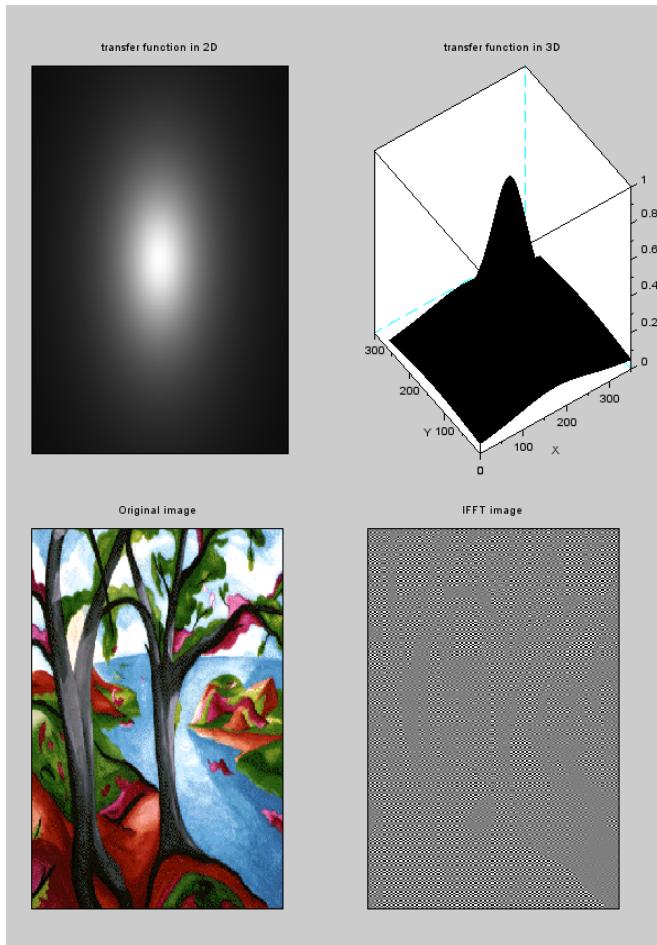
Output:



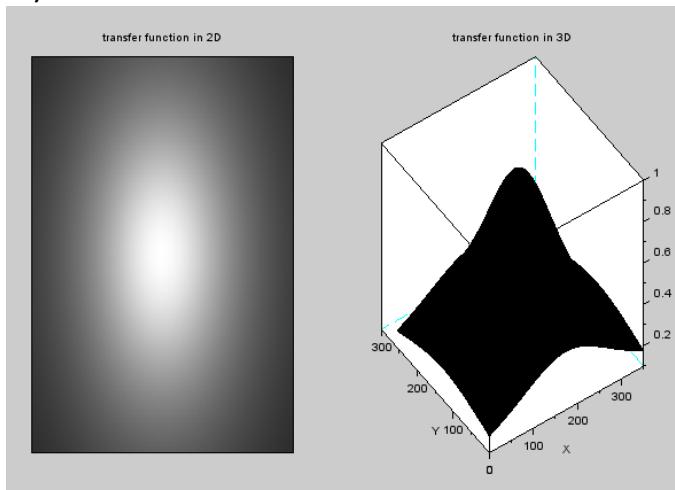
1) When D=30

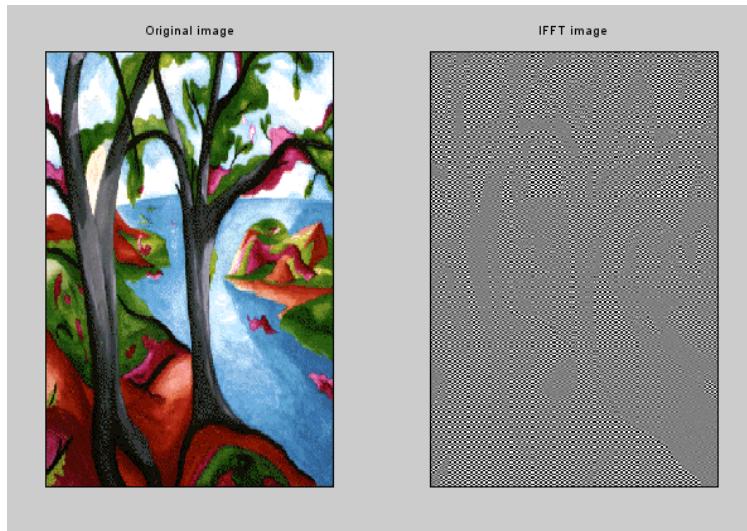


2) When D=50



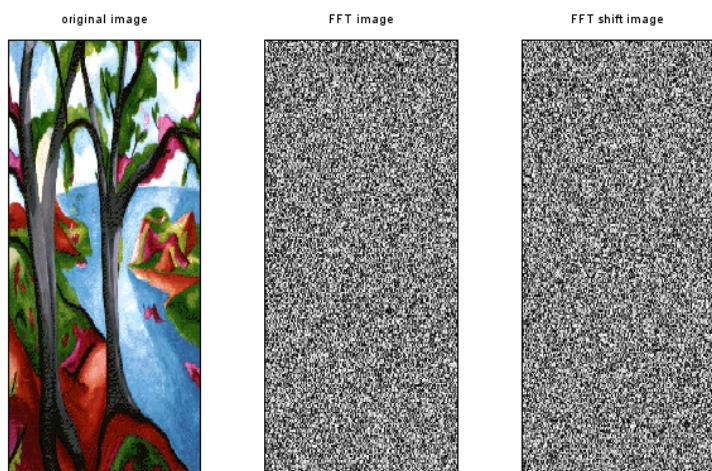
3) When D=100



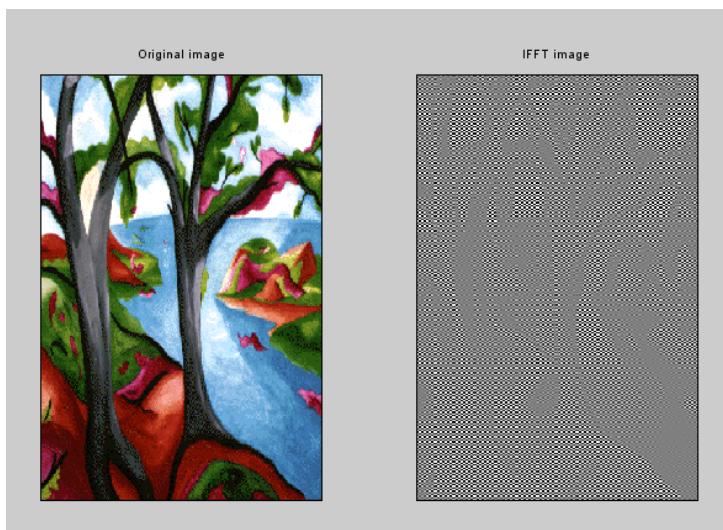
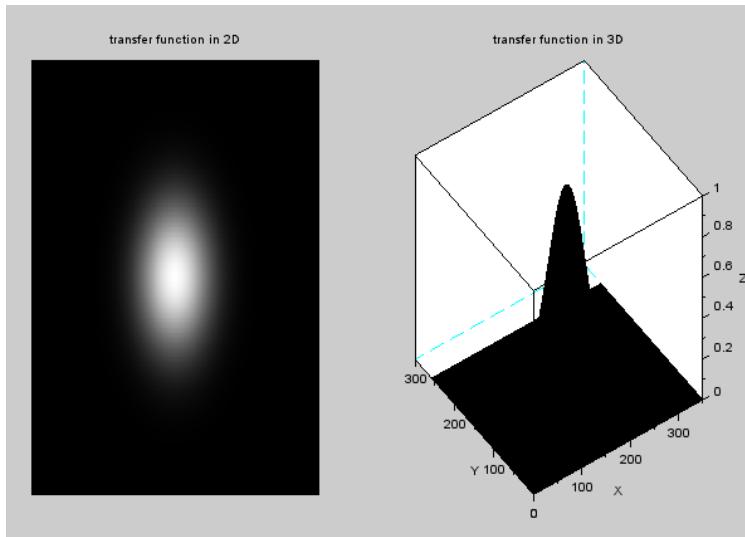


3) Gaussian Filter:

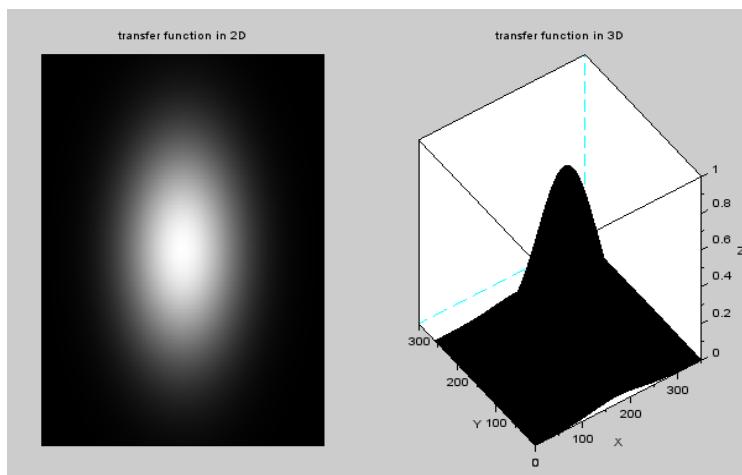
Output:

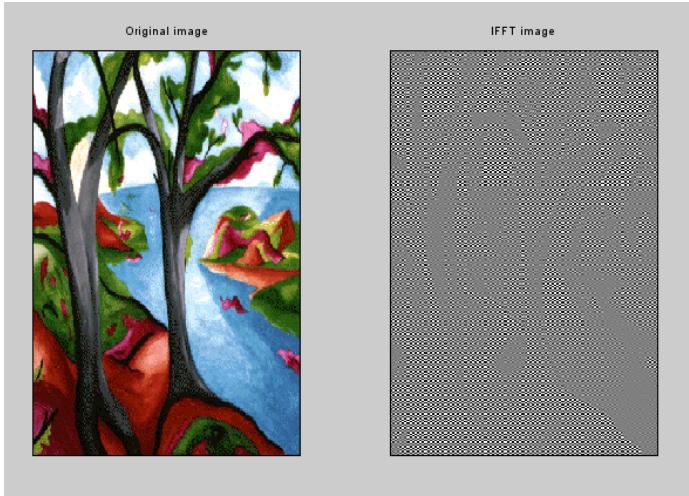


1) When D=30

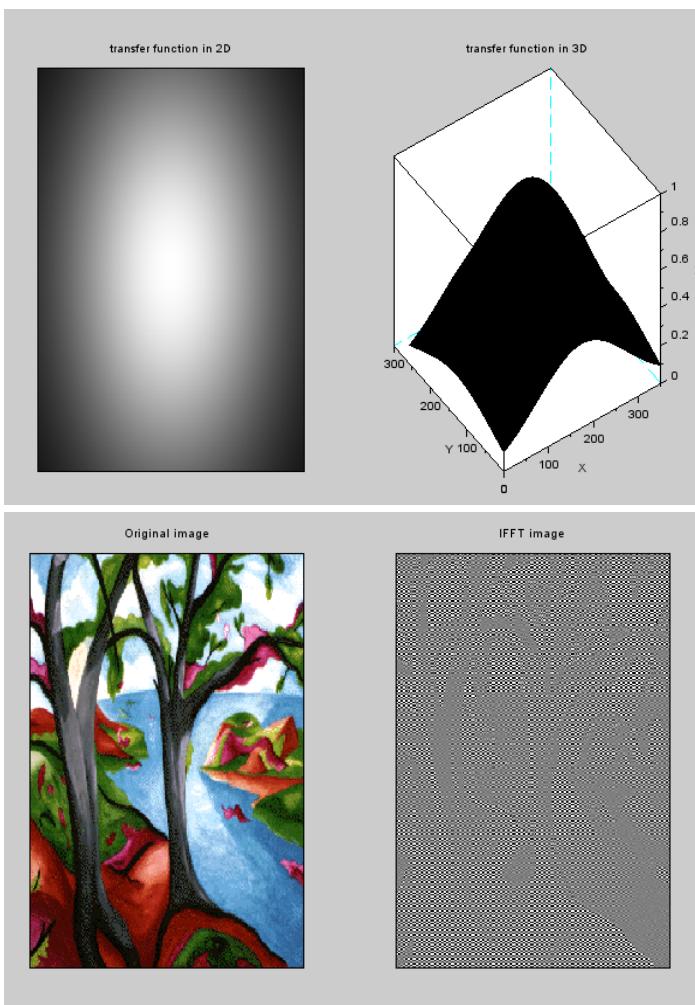


2) When D=50





3) When $D=100$



Conclusion: Therefore, frequency domain analysis was performed on an image. Three types of filter were used ideal filter, Butterworth and Gaussian filter.