# HW03

1. Gaussian and Laplacian pyramids:

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| A white dog sitting in the grass  Description automatically generated with low confidence | A dog sitting in the grass  Description automatically generated with low confidence | A dog looking at the camera  Description automatically generated with medium confidence |
| A picture containing building material, stone  Description automatically generated | A picture containing building material, stone  Description automatically generated | A dog with a human face  Description automatically generated with low confidence |

1. Different thresholds show different noises. T=50 shows best results.

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| --- | --- | --- | --- | --- |
| A picture containing text, silhouette  Description automatically generated | A picture containing text, silhouette  Description automatically generated | A picture containing silhouette  Description automatically generated | A picture containing text, dark, silhouette  Description automatically generated | A light in the dark  Description automatically generated with low confidence |
| T=5 | T=10 | T=20 | T = 50 | T=100 |

1. So T = 50 shows the best result among all. Statical distance helps reduce much noises.

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| A black and white image of a person's face  Description automatically generated with low confidence | A picture containing outdoor object, silhouette  Description automatically generated | A picture containing text, silhouette  Description automatically generated | A picture containing text, silhouette  Description automatically generated | A picture containing silhouette, dark, night sky  Description automatically generated |
| T=2 | T=5 | T=10 | T=20 | T=50 |

1. Dilation significally reduces “holes” in the picture.

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| A picture containing silhouette  Description automatically generated |
| Dilated image |

1. Back ground is mostly continuous as shown by labels.

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| A picture containing outdoor  Description automatically generated |
| Largest region by labels |