Kernel function impact on neural networks

This project explores the utilization of kernel functions at different layers within a convolutional neural network (CNN). Extensive research is conducted to examine their impact on convolutional, pooling, and fully-connected layers. It is observed that the linear kernel may not effectively fit the input data distributions, while higher order kernels tend to result in overfitting. Thus, a balance between complexity and performance needs to be achieved. The project proposes a solution by effectively employing kernel functions through the introduction of distortion-aware pooling layers.

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