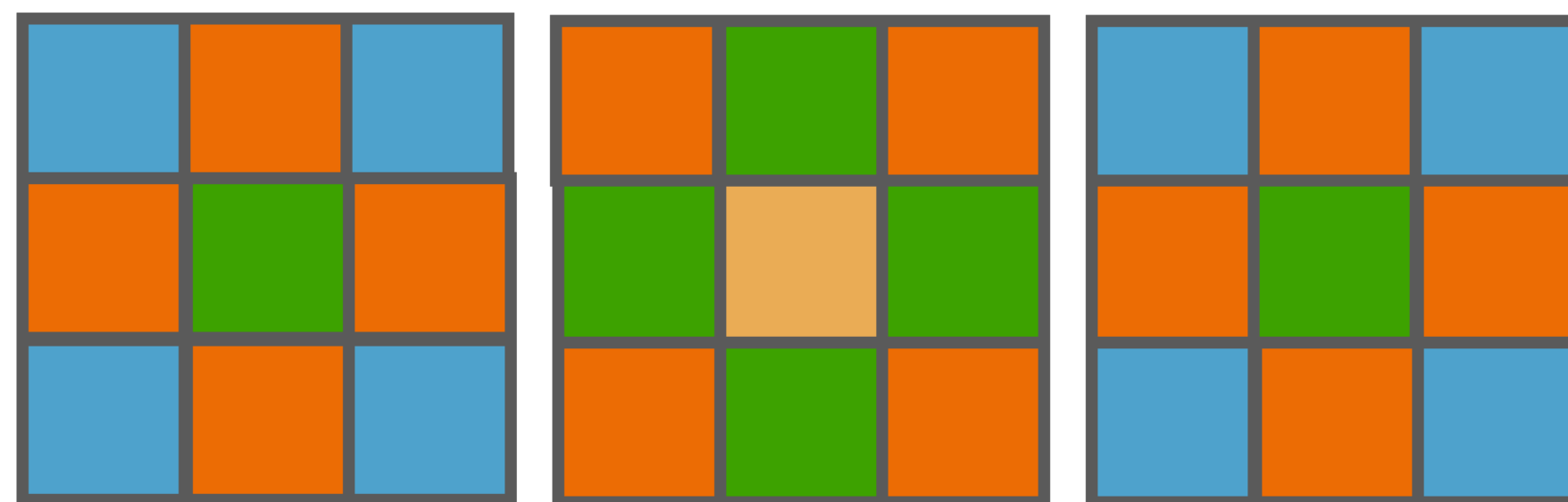
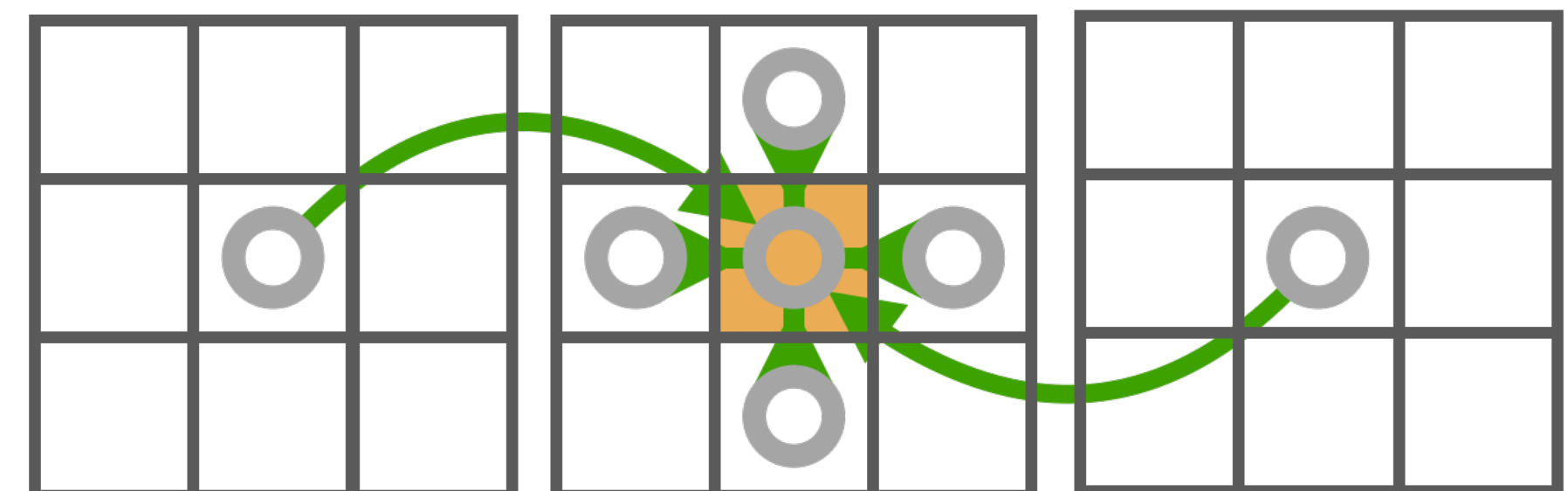


**Default** 3x3x3 kernel with 27 distinct values.



**Symmetric** permutation and rotation invariant 3x3x3 kernel with 4 different values (distances of  $1$ ,  $\sqrt{2}$  and  $\sqrt{3}$  to **centre** voxel).



**XEdgeConv** for  $k=6$  neighbors around the **centre** voxel (concatenation of feature vectors). Message passing through  $k$  parallel 1x1 convolutions and (max/mean) **aggregation** along the  $k$ -neighbors.