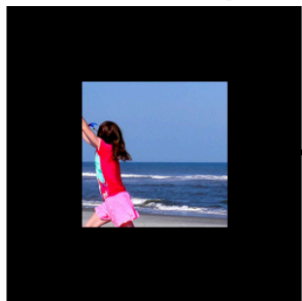
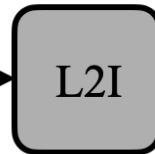
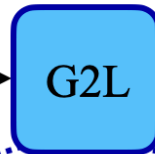
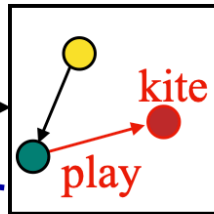
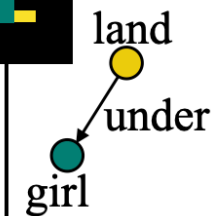
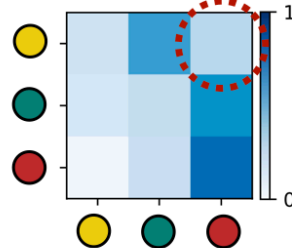


Partial Image X **Expanded Scene Graph \hat{G}** **Expanded Image Y** **Partial Scene Graph G** **Sec. 4.1 Laplacian Positional Encoder**

$$\text{LPE}\left(\begin{array}{c} \text{yellow} \\ \swarrow \\ \text{green} \rightarrow \text{red} \end{array}\right) = \text{LPE}\left(\begin{array}{c} \text{red} \\ \swarrow \\ \text{yellow} \rightarrow \text{green} \end{array}\right)$$

Sec. 4.2 Multiscale Graph Attention

Even there is no direct edge between and , our attention generates non-zero value, indicating their indirect connection.