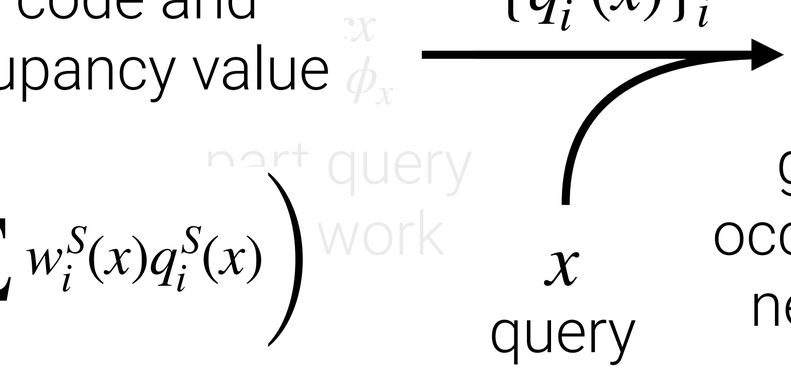
Method - Generalizable Shape Network

We approximate the object's occupancy $\sigma(x) \approx \sigma_S(x) := f_\theta(x \mid S)$ where f_θ is a neural network given shape parameters.

f^o aggregate all q_i^S into a single latent code and obtain the occupancy value

$$\sigma_S(x) := f^o_{\phi_o}\left(\sum_i w_i^S(x) q_i^S(x)\right)$$



$$w_i^S = \kappa(\max(0, d_i(x, C_i)))$$

$$\kappa = \left(1 - \left(\frac{a_i}{\rho}\right)^2\right)^3$$

ρ define the extent of the joint regions, κ provide a smooth falloff to 0 as a_i go to ρ.

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