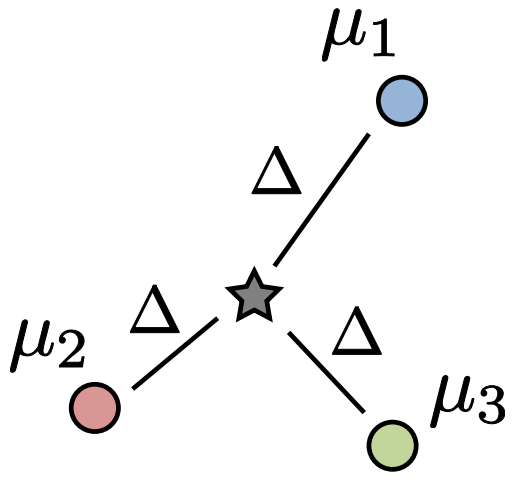

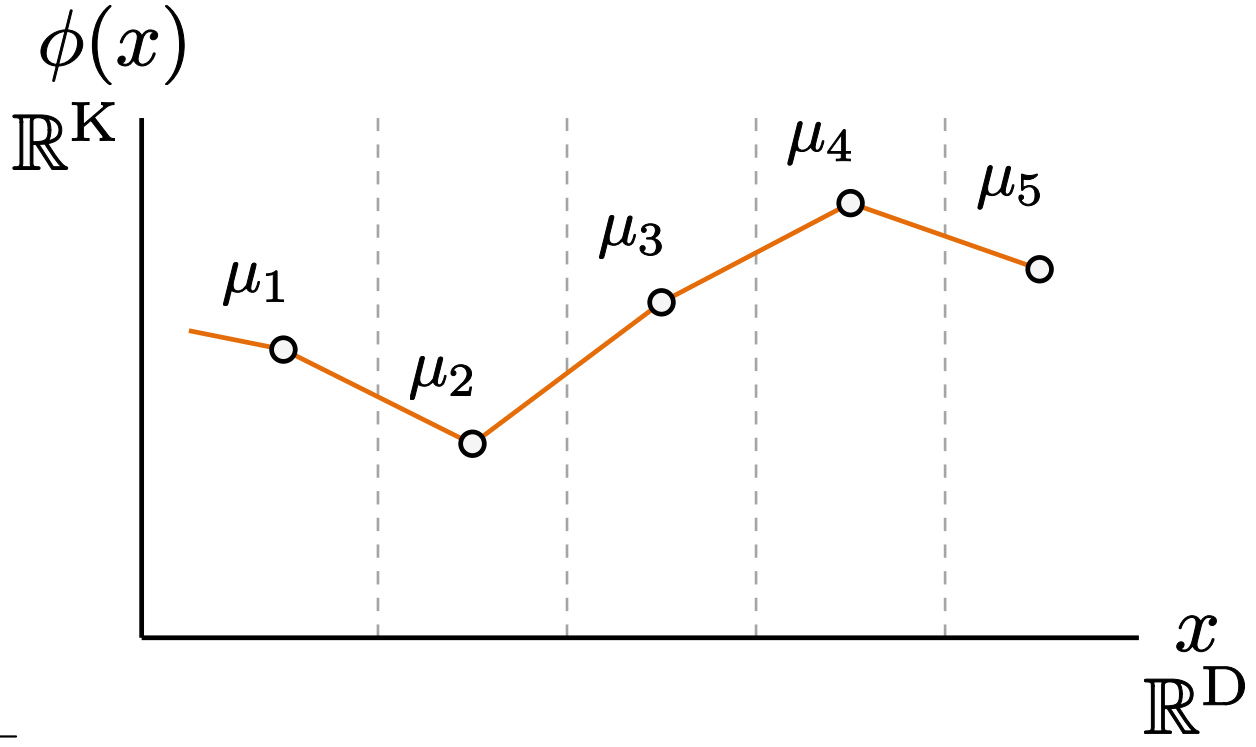

$$\mathbf{f}_{\mathrm{sv}} = [s_1, \mathbf{u}_1^\top, \cdots s_K, \mathbf{u}_K^\top]^\top$$

$s_k \propto$ hard/soft assignment

$\mathbf{u}_k \propto$ derivative w.r.t μ_k

Similar to FK, but captures only 0-th and first order differences to a k-means vocabulary