Algorithm 1 Fit a Kernel Density Network to the Data

Input: $(X, y) \in \mathbb{R}^{n \times d} \times \mathcal{Y}^K$ where $K = \{1, \ldots, K\}$
Output:

procedure FIT(X, y)
    for $k = 1, \ldots, K$ **do**
        $X_k \leftarrow$ rows of X s.t. $y = k$
        $\mathcal{P}_k \leftarrow$ GETPOLYTOPES(X_k)
    end for
end procedure