Algorithm ALGORITHM FASTEST FIRST TRAVERSAL

Input Data $\mathcal{D} = \{x_i\}_{i=1:n}$, number clusters K

defines *centers* $\mu_{1:K} \in \mathcal{D}$

1. pick μ_1 at random from $\mathcal{D}$

2. for $k = 2 : K$

$$\mu_k \leftarrow \underset{\mathcal{D}}{\operatorname{argmax}} \operatorname{distance}(x_i, \{\mu_{1:k-1}\})$$

3. for $i = 1 : n$ (assign points to centers)

$k(i) = k$ if μ_k is the nearest center to x_i