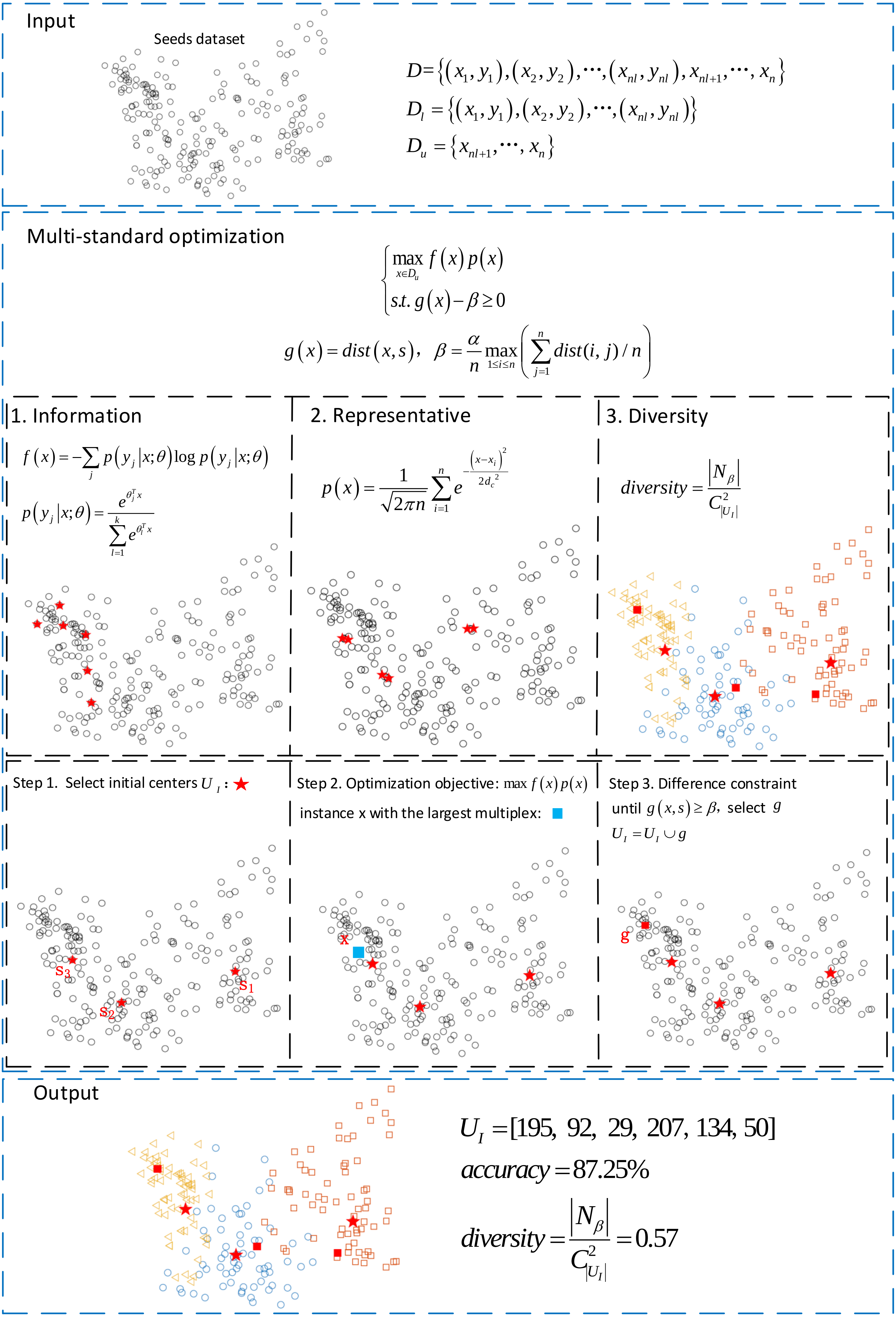

Input
Seeds dataset
$D=\{(x_1,y_1),(x_2,y_2),\cdots,(x_{nl},y_{nl}),x_{nl+1},\cdots,x_n\}$
$D_l=\{(x_1,y_1),(x_2,y_2),\cdots,(x_{nl},y_{nl})\}$
$D_u=\{x_{nl+1},\cdots,x_n\}$
Multi-standard optimization
$\begin{cases}\max\limits_{x\in D_u} f(x)p(x)\\ s.t.\ g(x)-\beta\ge 0\end{cases}$
$g(x)=dist(x,s),\ \ \beta=\frac{\alpha}{n}\max\limits_{1\le i\le n}\left(\sum_{j=1}^{n} dist(i,j)/n\right)$
1. Information
$f(x)=-\sum_j p(y_j|x;\theta)\log p(y_j|x;\theta)$
$p(y_j|x;\theta)=\frac{e^{\theta_j^T x}}{\sum_{l=1}^{k} e^{\theta_l^T x}}$
2. Representative
$p(x)=\frac{1}{\sqrt{2\pi}n}\sum_{i=1}^{n} e^{-\frac{(x-x_i)^2}{2d_c^2}}$
3. Diversity
$diversity=\frac{|N_\beta|}{C_{|U_I|}^2}$
Step 1. Select initial centers U_I :
S_3
S_2
S_1
Step 2. Optimization objective: $\max f(x)p(x)$
instance x with the largest multiplex:
x
Step 3. Difference constraint
until $g(x,s)\ge\beta$, select g
$U_I=U_I\cup g$
g
Output
$U_I=[195,\ 92,\ 29,\ 207,\ 134,\ 50]$
$accuracy=87.25\%$
$diversity=\frac{|N_\beta|}{C_{|U_I|}^2}=0.57$