

### 1. BORE (BEST OR REST)

```
LET Data = {Instances}
LET Attributes = {Column-wise attributes}
LET Best = {Instances ∈ Data of the best class}
LET Rest = {Instances ∈ Data of all other classes}
for A ∈ Attributes do
  for bin ∈ A do
    Prob_BEST = |Best| / |Data|
    Prob_REST = |Rest| / |Data|
     $FREQ(bin|Best) = |\{bin|bin \in Best_A\}| / |Best|$ 
     $FREQ(bin|Rest) = |\{bin|bin \in Rest_A\}| / |Rest|$ 
     $LIKE(Best|bin) = FREQ(bin|Best) * Prob\_Best$ 
     $LIKE(Rest|bin) = FREQ(bin|Rest) * Prob\_Rest$ 
     $LIKE\_BEST\_REST = LIKE(Best|bin) + LIKE(Rest|bin)$ 
     $RANK = LIKE(Best|bin)^2 / LIKE\_BEST\_REST$ 
  end for
end for
```

### 2. CLIFF

```
LET Data = {Instances}
LET Criterias = {Highest ranked value,attribute sets for each class obtained from BORE}
LET Prototypes = {}
for value,attributes ∈ Criterias do
  Prototypes = Prototypes ∪ {instances|instances ∈ data, value ∈ instanceattributes}
end for
```

### 3. MIDPOINT SAMPLING

Pick a point  $P_1$  randomly from training set.  
Pick the closest point  $P_2$  in the training set belonging to the opposite class.  
Find the midpoint  $M$  between  $P_1$  and  $P_2$ .  
Request a classification for the closest unlabeled point to point  $M$ .