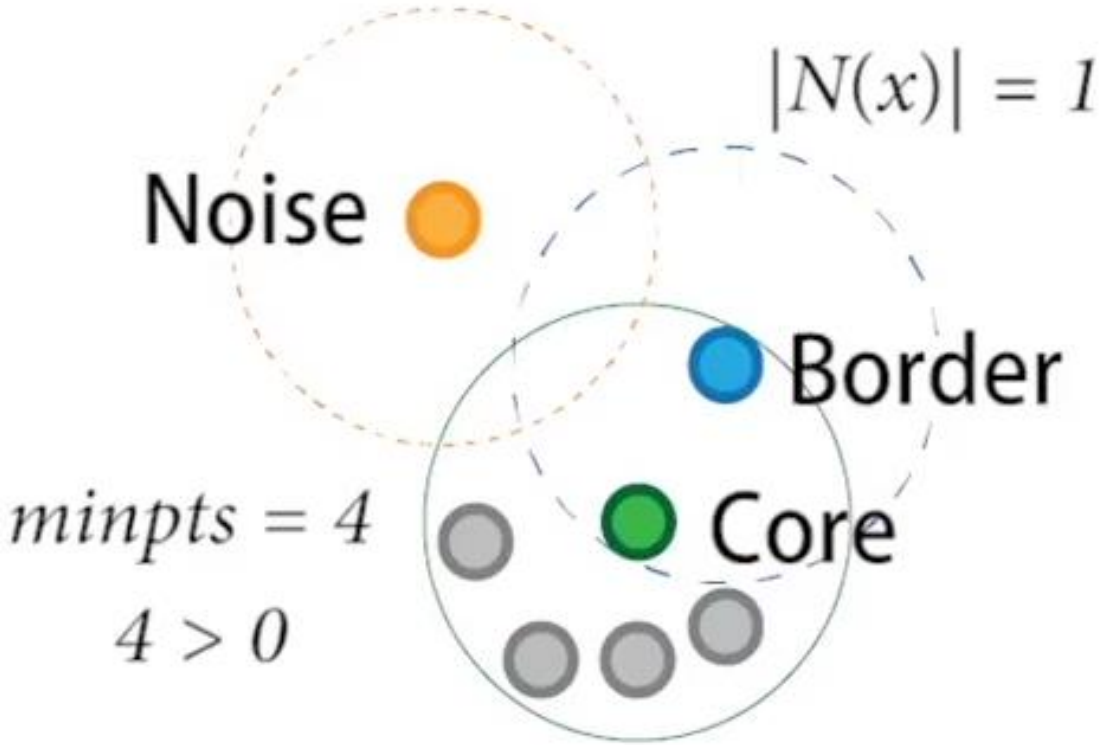
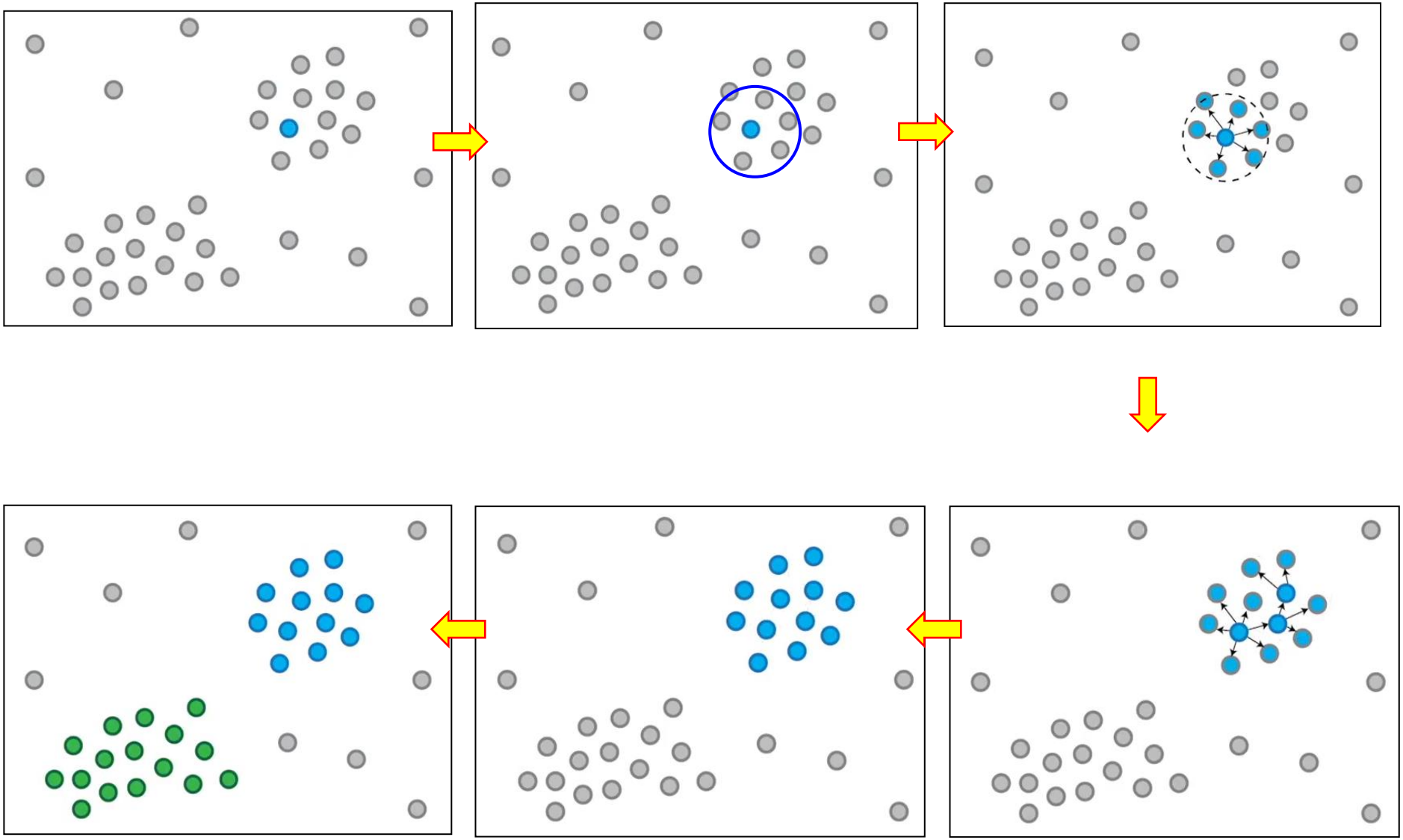
DBSCAN(Density-based spatial clustering of applications with noise)



出典：https://www.youtube.com/watch?v=5E097ZLE9Sg



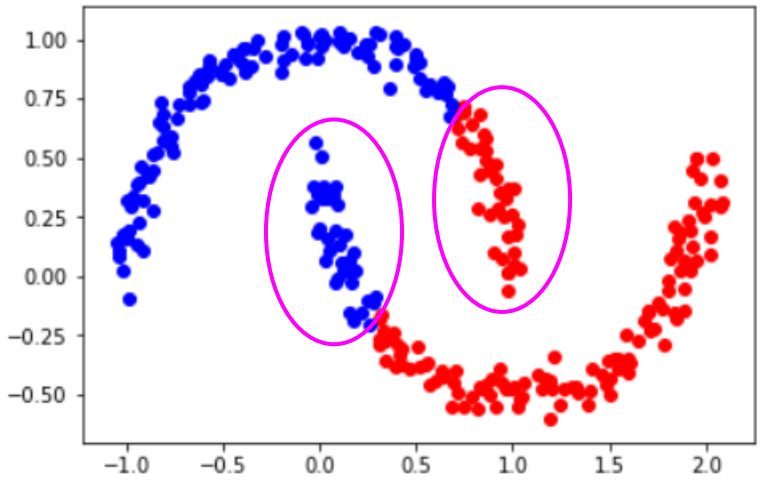
KMeans法

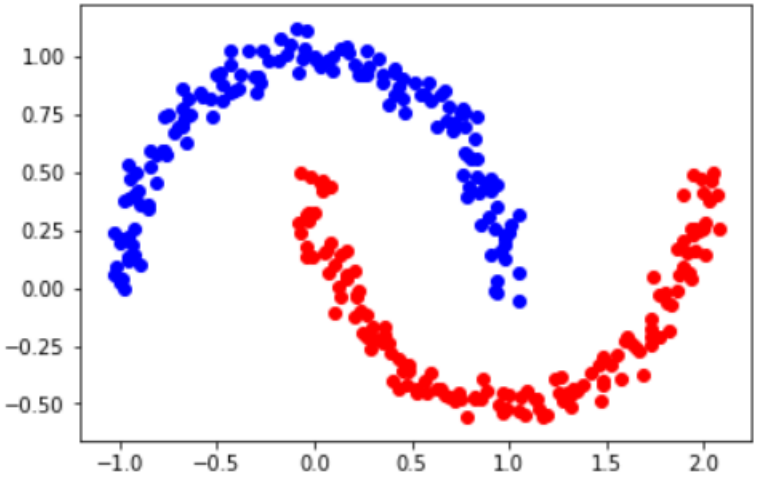
DBSCAN法

利点　・クラスタ数の指定なし
　　・種々の形状に対応可
　　・外れ値の影響なし
欠点　・パラメータ設定難しい
　　・決定的ではない

```
X,y = datasets.make_moons(n_samples=300,noise=.05)
```

```
kmeans = KMeans(n_clusters=2)
kmeans.fit(X)
plt.scatter(X[kmeans.labels_==0,0],X[kmeans.labels_==0,1],c="red")
plt.scatter(X[kmeans.labels_==1,0],X[kmeans.labels_==1,1],c="blue")
plt.show()
```




```
from sklearn.cluster import DBSCAN
X,y = datasets.make_moons(n_samples=300,noise=.05)
db = DBSCAN(eps=0.3, )
db.fit(X)
plt.scatter(X[db.labels_==0,0],X[db.labels_==0,1],c="red")
plt.scatter(X[db.labels_==1,0],X[db.labels_==1,1],c="blue")
plt.show()
```