

**Traning / Test
Dataset**

**Keypoint descriptors
generated by
SURF /SIFT**

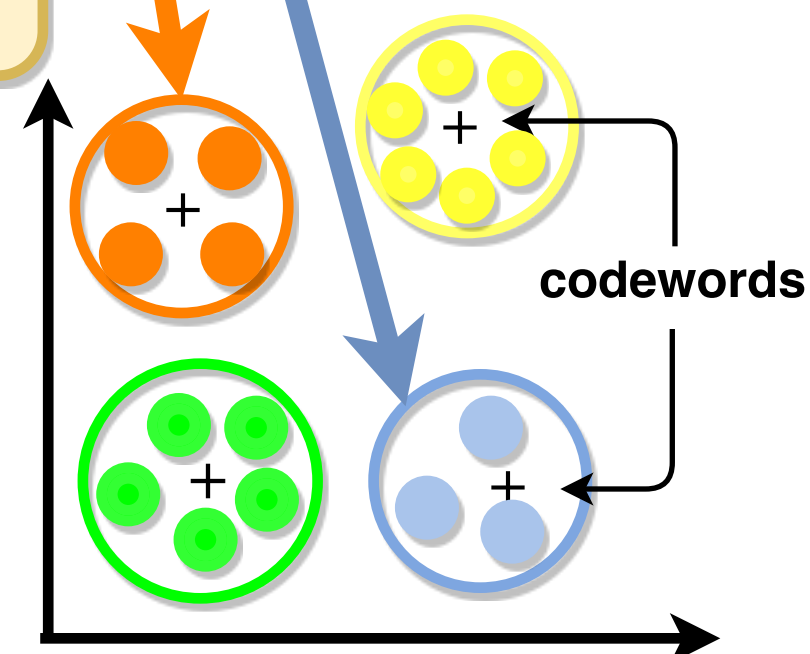
**Constructing a k-means
model using Keypoint
descriptor of Traning set**

$\begin{Bmatrix} F1 \\ F2 \\ \dots \\ \dots \\ \dots \\ \dots \\ Fm \end{Bmatrix}$
**The 1-th
Keypoint
descriptor**

$\begin{Bmatrix} F1 \\ F2 \\ \dots \\ \dots \\ \dots \\ \dots \\ Fm \end{Bmatrix}$

$\begin{Bmatrix} F1 \\ F2 \\ \dots \\ \dots \\ \dots \\ \dots \\ Fm \end{Bmatrix}$

$\begin{Bmatrix} F1 \\ F2 \\ \dots \\ \dots \\ \dots \\ \dots \\ Fm \end{Bmatrix}$
**The i-th
Keypoint
descriptor**



Model of K-means

Note : m can either 64 or 128