

```

for( k in 1:K )
{
  pi_k <- 1 / n * sum(c_ik[,k])
  mu_k <- ( t(c_ik[,k]) %*% donnees ) / sum(c_ik[,k])
  sigma_k <- sqrt( ( t(c_ik[,k]) %*% (donnees - mu_k)^2 ) / sum(c_ik[,k]) )

  param[[k]] <- list(p=pi_k, mu=as.numeric(mu_k), sigma=as.numeric(sigma_k))
}

# Calcul de la nouvelle vraisemblance
fk <- matrix(0,n)
for( k in 1:K )
  fk=fk+ param[[k]]$p*dnorm(donnees,param[[k]]$mu,param[[k]]$sigma)

nL = sum(log(fk))
}

# Classification des donnees selon les c_ik
clu <- matrix(rep(1:K,1), ncol = K, nrow = n, byrow = T)
mat <- c_ik * clu
cluster <- apply(mat,1,sum)

param[[K+1]] <- cluster
param[[K+2]] <- nbiteration
return(param)
}

```