3 >	人。经共数据入了
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(b) 05/ :	

Zxz data Z

双常data X

第data Y=(X,Z)

参数 O.

 $L(0|\chi) = P(\chi|0) \rightarrow 直接求解困难.$

 $L(0|Y) = P(Y|0) \rightarrow 简单, 了海洋算.$ $P(Z|Y,0) \rightarrow 简单$

3十岁已知完全的是是dataT.OTO后多定期的.

E-step.

M-step

极大仍然

↓

见函数.

Q(0|0)下, 在完整被据下 Q G Q(0|0) Q(0|X) Q(0|X) Q(0|X) Q(0|X) Q(0|X)

 $Q(0|0^{(t)}) = \int \log L(0|Y) p(\overline{z}|X, 0^{(t)})$ $= E \Gamma \int \log L(0|Y) |X, 0^{(t)}|$

0 (th) = arg mats Q(010(t)),

log P(X(0) = S log P(7,12)0) dz

 $= \log \int \frac{p(x, z|\theta)}{g(z)} g(z) dz \qquad \text{(3)} g(z) = p(z|x, \theta^{(t)}).$

利用

> log b151x,0(4)) . b151x,0(4)) 95

= $\int \log P(x, 2|0) P(2|x, 0^{(t)}) d2 - \int \log P(2|x, 0^{(t)}) d2$

Yz为缺税的数据.

* 1,12 "d Exp(0) = 0etp[-yo]

 $\gamma_2 \leq \gamma_2 = \frac{3}{2}$ 22 $\gamma_3 = \frac{3}{2}$ 22 $\gamma_4 = \frac{3}{2}$

 $\log P(y_1|\theta) = \log \theta - y_1\theta.$ $\frac{1}{\theta} - y_1 = 0$ $\theta = \frac{1}{\theta} = 0,2$

最长的张佑计,

Banto. P(y, y2/0) = 02 eppf-(y, +y2)0}

log Ply,, yz (0) = 2log 0 - (y, +yz)0

 $P(y_2|y_1, 0^{(t)}) = P(y_2|0^{(t)}) = 0^{(t)} etp \{-y_2 0^{(t)}\}$

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周南華

但例

解的独

 $\mathbb{Q}(0|0^{(t)}) = E[\log P(y_1, y_2|0) | y_1, 0^{(t)}]$ = $2 \log \theta - y_1 \theta - \theta \cdot E L y_2$

E-step: $\theta = \frac{20^{(t)}}{50^{(t)}+1}$ $0^{*} = \frac{20^{(t)}}{50^{(t)}+1} \Rightarrow 0^{*} = 0.2$

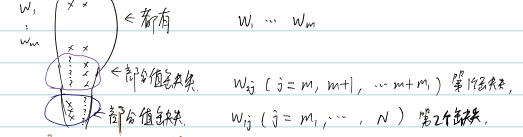
EM.

奉分2	一原地文中
	J

最大的統治	



$W = (W_1, W_2)^T$	w =N(/ 1, ≥)	Ma(M2) 22(21 512)
$P(W \Theta) = \frac{1}{(27) \Sigma ^{\frac{1}{2}}}$	etp / - = (w-n) T 5 1 (n	



通过后3度分布的其图图外复数据.

$$\vec{y} = (y_{1}, \dots, y_{m})$$

$$\log L(\theta|y) = -n \log (2\pi) - \frac{1}{2}n \log |z| - \frac{1}{2} |z| |w_{1} - \mu| |z|^{2} (|w_{1} - \mu|)$$

$$|z| = |z_{11}|^{2} |z_{12}| = |z_{11}|^{2} |z_{22} - |z_{21}|^{2} |z_{12}|$$

$$T_i = \frac{1}{2} W_{ij} \quad (i=1,2,\dots)$$



