Thererotive looning algorithms

Pismiminative us generates would be the to the to the to the to the total the total to the total to the total tota

discriminative : learn plyix directly on mapping directly from X to y.

generative ply|x) = \frac{p(x|y)p|y)}{p|x)} \Rightarrow model p|x|y) picked by graph de

() ang new p(y|x) = ang max p(x|y) p(y) p(x) = ang max p(x|y) p(y)

(d-1) log (ah-1) + dlog (ah) = de= Gaurrian dissiminative analysis CGDA)

> $\rho(x; M, \Sigma) = \frac{[(2\pi)^{d/2} - (4\pi)^{d/2} + (2\pi)^{d/2}]^{\frac{1}{2}}}{(2\pi)^{d/2} |\Sigma|^{\frac{1}{2}}} \exp\left[-\frac{1}{2} (x-m)^{\frac{1}{2}} \sum_{i=1}^{d} (x-m)\right]}$ 1-2 th (who (1-3 d-1 + 9 (all)) ==

Where MERd, IERMA CLOVENIANCE natrix).

修设特征x是连续随机等量,则GOA模型为:

P14) = \$9 (1-\$) 1-4

PIXIY=0) = (2x)d/2/2/12/11/2 exp[- = 1x-no) = [-1x-no) PIXIY=1) = (2π)d12 |Σ|+12 exp[-1/2 |x-m) = Σ+ (x-m)]

(a, 2 for ab \$ 1 fg = app & 0 = form (a, 2 1 (1-2 - 1 (1-2)) = - =

The and I get on a sup Told

ラヤ=大王yen

.: log likelihasal is lambonado pinal morarasa l(p, uo, u, Σ)= log τη p(x10), y10) 1 p, uo, u, Σ) = tog to P(xit) (yit); Mo, M, E) P(yit); p) = \frac{1}{2}\log P(xi')(yi); uo. u., \(\int) + \frac{1}{2}\log P(yii); \(\phi\) = 2 tog [\$410) (1-p) 1-40] = = = [y1i) log p + (1-yii) log (1-p)] = = = [yin log p + log (1-p) - yin log (1-p)] = \frac{2}{i!} \left(y'i) \frac{1}{p} + \frac{1}{1-p} (-1) - y'i) \frac{1}{1-p} (-1) where settle? I & & Pain Crown $= \sum_{i=1}^{n} (y^{(i)}(1-p) - p + y^{(i)}p) = \sum_{i=1}^{n} (y^{(i)} - p) = 0$ ⇒ Ø= 大型 y的 4.9.1 64 (d-1) EA 5(6/6 2 · du = du la expt- 21x-most 2 1x-most 2 1x-most $= -\frac{1}{2} \frac{1}{2} \left[\sum_{i=1}^{n} (x_{i}^{(i)} - w_{0})^{T} \sum_{i=1}^{n} (x_{i}^{(i)} - w_{0}) \right]$ $= -\frac{1}{2} \frac{1}{2} \left[\sum_{i=1}^{n} (x_{i}^{(i)} - w_{0})^{T} (x_{i}^{(i)} - w_{0}) \right]$ $= -\frac{1}{2} \frac{1}{2} \left[\sum_{i=1}^{n} (x_{i}^{(i)} - w_{0})^{T} (x_{i}^{(i)} - w_{0}) \right]$ = - \frac{1}{2} ((\bar{2}^{-1})^T - \bar{2}^{-1}) (\bar{1}^{(\bar{1})} - \mathrea_0) = 0 周姐: $\frac{\partial U}{\partial m} = 0 \Rightarrow m = \frac{\frac{2}{12}I\{y(i)=1\}X^{(i)}}{\frac{2}{12}I\{y(i)=1\}}$

: 36 = - 1 = [(ng 151 - + (xi) - myi) TS (xi-myi)] $= -\frac{1}{2} \sum_{i=1}^{n} \left[-\sum_{i=1}^{n} \left[-\sum_{i=1}^{n} + \left(\chi^{(n)} - \mathcal{U}_{y(n)} \right) \left(\chi^{(n)} - \mathcal{U}_{y(n)} \right)^{T} \right]$ $= \frac{1}{2} \sum_{i=1}^{n} \sum_{j=1}^{n} \left[\chi^{(i)} - u_{y(i)} \right] \left(\chi^{(i)} - u_{y(i)} \right)^{T} = 0$ => Z = (X1i) - Myni) (X1i) - Myni)) T Naine Bayos 柳延美名数心. Children Chippeld . Churid Chirida Ludy, Gives, Bilds) = 11 6 12/10 (Air) bildie) (10 A11 - Exide 16 16 (10 A1 11 Md = ahly " (10 A1 = by super Sign = # Il you all . Sign = # Il x 1 I # all soot 1 = 1 1 you = 1 1

GDA and logistic regrovion

为 PIXIY) 夏鹭鱼,高斯多季饮 PIYIX) 满足逻辑的归油的

Ply ply=1/x;
$$\emptyset$$
, Ξ , m , m) = $\frac{1}{1+\exp(-\theta^T x)}$

乡为plylx)海路高斯多对 BOSISTLR。

Naive Bayes

特征是治数治.

Naive Bayes Assumption.

pix, ... , xdly) =

= pix 14) pix 1/4 x 1/4) ... pix , x2,..., x2/4)

Luy, \$14=0, \$1401) = TT P (xin) (1910) P(410)

where \$ = p(y=1), \$ 1y=0 = p(x;=1 | y=0), \$ 1y=1 = p(x;=1 | y=1)

$$\frac{1}{2} |X_{j}|^{2} = \frac{\sum_{i=1}^{n} |X_{j}|^{2} |X_{j}|^{2} |X_{j}|^{2} |X_{j}|^{2}}{\sum_{i=1}^{n} |X_{j}|^{2} |X$$

強働:
$$p(x|y=1) p(y=1)$$

$$p(x|y=1) p(y=1)$$

$$\neq p(x|y=1) p(y=1)$$

= # p(x; 1y=1) . p(y=1)

CHEXILE CAN JELLER

假没输入的特征分别取此部不同的值,则P1约1y)在该建模为多次对分布。 且另分为运续值, 客会进行, 各处操作.

PW I. PIXILY

haplace smoothing

X) を放射の対象をいることのではないのできないという。 をはないないのです。

166没吃机多量是服从多级式多布从小…, Look的便。翻定的分泌领域有别 smoothing. (25 moon to me will be come report to me with the company to the comp $g' = P(z=j)' = \frac{1 + \sum_{i=1}^{n} I (z=j)}{k + n}$ production = more ready)

如此 · 在我们也是不是不好了

The sold it was a fire

fie alt if - B

text classification with no

18没分記が第からお、C包分業別具有比神取值。

V Bernoulli model

XXXX one hot 3th let,

pldi e) = p(dilc)p(c) = # p(dij lo)p(c)

PCC)= nx → 属于紫紅 K 的文档数 分点、文档数。

Pldij Ic) = Nx(Wj) →属于教以且包含英词wjis文本教教

1º generalization error

2) Multi nomial model $\hat{p}(dij(c) = \frac{n_k(w_j) + 1}{n_k + 2}$

文档接角 multi-hot (term-frequency) 3 大美方.

pldisc) = pldisc) ples = Tipldig (c) pce)

P(c) = An (mi) ne

p(dij/c)= nwx(wj) → 属于委员长的文档中心,生现这次结中的
nwx 中层接到长的文档中间出现的类。实验之后。

Laplace (moothing

Pidigle = nwk(wj)+1