

hello, world

$$\sum_{i=1}^n a_i = 0$$

$$f(x)=x^{x^x}$$

$$G_R(D,A)=g(D,A)/H_A(D)$$

$$C_\alpha(T)=\sum_{t=1}^{|T|}N_tH_t(T)+\alpha|T|$$

$$H_t(T) = - \sum_k \frac{N_{tk}}{N_t} \log \frac{N_{tk}}{N_t}$$

$$C(T) = \sum_{t=1}^{|T|} N_t H_t(T) = - \sum_{t=1}^{|T|} \sum_{k=1}^K N_{tk} \log \frac{N_{tk}}{N_t}$$

$$C_\alpha(T) = C(T) + \alpha |T|$$

$$Gini(p)=\sum_{k=1}^K p_k(1-p_k)=1-\sum_{k=1}^K p_k^2$$

$$\min_{a < x < b} \{f(x)\}$$

$$f(x)=\sum_{m=1}^M c_m I(x\in R_m)$$

$$\sum_{x_i \in R_m} \left(y_i - f(x_i)\right)^2$$

$$\min_{j,s}[\min_{c_1}\sum_{x_i\in R_1(j,s)}(y_i-c_1)^2+\min_{c_2}\sum_{x_i\in R_2(j,s)}(y_i-c_2)^2]$$

$$Gini(D,A)=\frac{|D_1|}{|D|}Gini(D_1)+\frac{|D_2|}{|D|}Gini(D_2)$$

$$S^2 = \frac{1}{n-1} \sum_{i=1}^n (X_i - \overline{X})^2$$

$$y^{(i)}$$

$$(x,l_x)$$

$$\mathbf{1}$$

$$\tau(\cdot)$$

$$\tau_s(\cdot)$$

$$\tau_a(\cdot)$$

$$\tau(\cdot) = \tau_s(\tau_a(\cdot))$$

$$\phi = id + u$$

$$x \circ \phi$$

$$\phi^{(i)} = g\theta_s(x, y^{(i)})$$

$$\phi^{-1(i)} = g\theta_s(y^{(i)}, x)$$

$$\psi^{(i)} = h\theta_a(x, y^{(i)} \circ \phi^{-1(i)})$$

$$\tau_s^{(i)}(x) = x \circ \phi^{(i)}$$

$$\phi = g\theta_s(x, y^{(i)})$$

$$\tau_a^{(i)}(x) = x + \psi^{(i)}$$

$$\psi^{(i)} = h\theta_a(x, y^{(i)} \circ \phi^{-1(i)})$$

$$\begin{aligned} & L_a(x, y^{(i)}, \phi^{(i)}, \phi^{-1(i)}, \psi^{(i)}, c_x) \\ &= L_{sim}((x + \psi^{(i)}) \circ \phi^{(i)}, y^{(i)}) + \lambda_a L_{smooth}(c_x, \psi^{(i)}) \end{aligned}$$

$$L_{sim}(y_i, y) = ||y_i - y||^2$$

$$\lambda_a L_{smooth}(c_x, \psi) = (1 - c_x) \nabla_{\psi}$$