0182571222461919921 16 July, 2024 Andrew Ny > Pioneer of Machine Learning 27 August, 2024 Types of Loses What is ML? Coursera Machine Learning Course 1 d+sam & 28 August, 2024 unsupervised > cluster Lecture 2 Laxabra x, 0 + 0 - 6 moon to Types + 9512 x 10 + 00 - 99079 # 3 Septembers, 2024 On Double Slot => No class Attendance adone ut 1000001 We know 5120 - 1850 sq. + = moorbad

4 September, 2024: 100810 4505 4106 01: grantinear Regression of glander 1>Mid Types of Loses 27 August 2024 ch. I st IM of Dodly 10 september, 2024 Courserra Machine roissangan Dourse yz mx+b 28 August 2024 Unsupervised > obster y = θ0 + θ, x, + θ2x2 6 smulsol # proce = 00+0, x size + 02x Bedroom 0, 2 - 80000 } hiven

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(3 september 2024 02 = 10,000 / Duestion We know, Size = 1850 sq. Bedroom = 4

:. price = -80000+ (200 × 1850)+ (10000 x 4) 202 80,000 + 37,0000 + 40,000 1 1 3,30,000 1 11 19809 - Dalons 7 Loss 2 The difference between priedicted value e sil sodo of X Adual valve. Exercise 2 In seed Angibornio 2707 / 200 mg MSE 2 In & [Actual MpGr. - Predicted MpGr) World Herlation (22+16-1)+00-2-1012 +012/00 z 2.2 MSE Less 2 Better Model # Gradient Descent > Optimization Algorithm Firest T-level on the Done & Mary on the Color belowers ! 1 001 14 /x 785 0 100 (20) 3-1/b/ Mills & Edwing Indad

11 September 2024 000) + 00008. 3500 Lecture 4: Gradient Descent Exercise :- Page: 11 If only 1 variable, ho (x) = 0 0 + 0, x, Balch + stochastic Equations: [for Gradient Descent] Batch Garadient Descent: will be given Update reule: (nitial valve) & z learning rate 1,011 2,00 = 200 = 00 (ho (xi) - y(i)) The moth z obsimile & ((ho: (x(i)) - y(i)) x, (i)) Firest Iteration: X = 0.01 hp(x(i)) = ho(x) = 0.25 x, - 100 predicated value Data points:

Forz, 20, (1) = 2104 (181 y 6) = 400 12 Price = Priedicted value (1) n x,(2) 2/1600 × 10.0 y (2) 2 330 St. 00 M X (3) = 2400 + (1003)x2 3.698 X - ,0 -,0 11-+ (00)/x105-j 01/11/11 1/11/11 1/600 + 1/11/11 Batch (GD (one itercution): [1916] => ho (x(1)) = 0.25 x 2104 - 100 = 426 <--=> ho (x(2)) = 0.25 × 1600 - 100 = 300 < 2> hp(x(3)) = 0.25 x 2400 - 100 = 500 < 1 Loss - forc 10; (1) 31104260- 400 = 26 $\chi_1(2) = 300 - 330 = -30$ Loss x, (3) 2 500 - 369 2 131 Loss u

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Update do, Herre, n = 3 (siven), do = -100 (given)
 For $ 00 = 00 - 00 - 3 (-260+ (-30) + 131)
GD
                                                                                    z -100 - 0.01 x - 300 x 1270)
                                                    7 - 100.42 OFFE TO THE STATE OF STATE O
                                                Update 0,, 1000/6
                                           $ \text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\te}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{
                                       [Here, 0, =0.25 (-30 x 1600) + ]
Given ] (1012) 100 (131 x 2400))
                                            z 0.25 -(0.01 x = 3 x 84 321104)
                                          605 W 1861 -11009
                                                                                                                   0.25 - 1070.35
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                                          Batch > 00, 0; whole sample
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The Balch + Aproportion of the mount # Deline Linear Regression with a propert value and holour value is signed on Ans: The mathematical term for linear regression can be represented by the help of this equation, y 2 mx+ b. wheree y'is Dependent on the independent value world of incircond, m' is slope, and b' is a constant value. Linear Regression is

a model for prediction, where it I has Single /multiple features. A model can be divided by the type of its supercrision. The classification is supervised, unsupervised and semi-supervised. Unsupervised one is also called cluster. Gradient Descent is known as the optimization algorithm. In a model. the Mitherence between predicted value and Actual value is considered as hoss. The MSE value is wfor Ermoren Calculation on the less MSE, the better model. Example: Squille Bedricoms Price Predictes 20101. Anshrogano 2500 2 1 cm 0.9 cm 2 1 cm 0.9 cm 12.1 cm ei 0 6mm 1794 di 3mm 6m90 latins 10 95 latins ei broissant 325 mosmil Aulor Anto Buerr opo laths Herre, bradient descent is a mathematical technique that iteratively find the weights and bias, which produce the model with the lowest loss. Where X is the learning trale & O is the weight parcameters at the n-th iteraction. 4 Herre Equation + Features Needed to be mentioned + Graph of loss and accuracy tothe Example with Math + Explanation. => Big Issue than # Oventitting + Undertitting

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