Linear Regrossion bon wisered 2 20030011-9 Josippin 199 bornsicu 2.91 80.2 2011 ?) equation define votat प = mx+c जिस्टी (प3मा शाला जात्र। मिन २ दी शामि शाल जिस्से दूरा, X2}. y = m, x, x2 + c -> colletion. in) find loss function ale 2 (4- ypred) 2 mx x2+e 1 Boognit actual. Mx1 X2 +0 1 walve in walve in alleron of Garas db (1.41, 1.9 etc) (43) 21070 0173, at 21070 60783 egn JSITES, point / Pan / motos SSR = [(y-yprod) = 1 (1.4-(mx.5+0)2)+(1.9-(mx2.3+1)) +(3.2-(mx2.9+0)2) iii) find derivative of loss function with trespect to m and c individually.

 $\frac{d}{dm} (SSR) = \int_{0}^{2} (1.4 - .5m - c) \times (-5) + \int_{0}^{2} 2(1.9 - 2.3m - c) \times (-2.3) + \int_{0}^{2} 2(3.2 - 2.9m - c) \times (-2.9)$

 $\frac{d}{dc} (SSR) = \frac{1}{3} (1.4 - 0.5m - 0) \times (-1) + \frac{3}{3} 2 (1.9 - 2.3 - 0) (-1)$ $\frac{d}{dc} (SSR) = \frac{1}{3} (1.4 - 0.5m - 0) \times (-1) + \frac{3}{3} 2 (1.9 - 2.3 - 0) (-1)$ $\frac{3}{3} 2 (3.2 - 2.9m - 0) \times (-1)$ $\frac{3}{3} 2 (3.2 - 2.9m - 0) \times (-1)$

is) Assume values for unknown parameters, if not given and update them.

रिव (43मा आल्ह, अतम paittug (1) 1899

m=1, del-0; (x2)0.01

1780 (c) - (c) - 3 de (ssp) x x .

egn (P) porting of the values, ind brid (iii polloobicition of desperon of desperon (9-me dm) & (55R) = -.8 (9-me dm) & (-) x (9-me -- 1) & (-) & (928) - Ster size = dm (55R) x d dm (55R) x d dm (55R) x d = m(old) - \(\frac{d}{dm} (SSR) \chi \alpha \). (6-)(3-6.5-Pen)62+ (1-)x(3-ma--poi)2= (928) b de (5.2-2.9m - 0) x (5-1) + 52(1-9-2.0) b - (4-9) 2 (3.2-2.9m - 0) x (5-1) } = 1 + .0681) - 00 in) Assume values 1800 appending parameters, if not given and update them. (m) wan egn (ii) putting the values, 18 (SSR) = 5-106 , I = 100 new(e) = C(old) - S de (SSR) xx.

$$=(0 + .016)$$

we will continue this unless tangent becomes on step size 0.001/.0001.

for, iteration $2 \rightarrow m = 1.008$, C = 0.016 $\alpha = .01$.