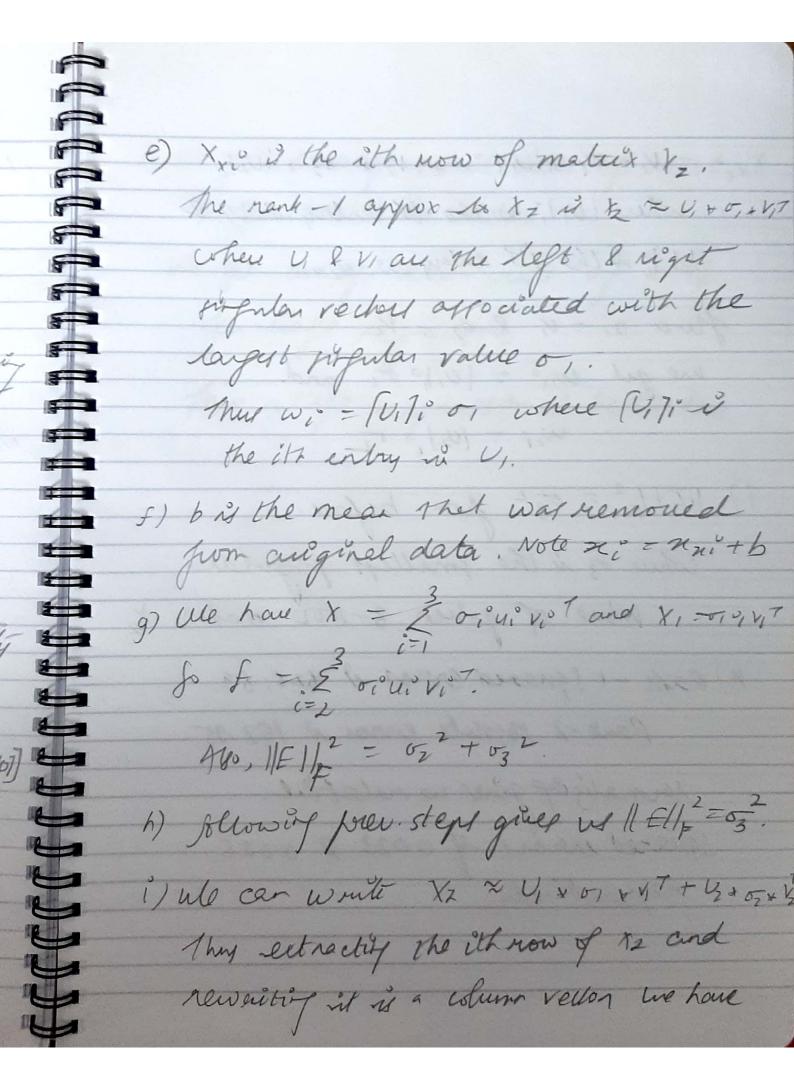
Asgn 6 ECE 532 Agar Deep Hoge 1. fine A is sank I and pymnetric its grifular value dewrip i A = b, V, V, T 1 V, V, T 60 b, = A30 = 11/20112 11 2, V, V, T 601/2 of // 1, v, v, 760/1 = /2v, 760/ A b1 = 11 sign 3 V, Tbo} They is one ileasin power method convergy to the correct girgulas vectos. The fign closest matter, give of is a propular rec, then -v, is at a a grigular vector.

- 2. a) Data appears to be concentrated along a line, as even more so, in a plane but gives it does not include the arigin its not a pubspare.
 - b) We can recent the data by removing the mean value from every datapoint.

 This will center the cloud on the ange & a line / plane cyprox imeting will ther include the origin.
 - captures the meganity of the variability in data. I plane ceptures even
 - d) a = V(:1) on a = np. transpose (v D(:,6))
 see plot.



Xxx = V, x 0, x | V, 10 + V2 x 02 x | V2/c where (VIII is the ith entry in U, & Vali i the ith entry is uz flere a, = V, & 92 = 1/2 me get wir = 10,1,00, and W21 - 102/10 2 1) 1/F/1/= = 032 from befare. where of is the smallest girgular value of given 3-1000 making &. h) Rah -1 Squared error of 626.69. Rank -2 Absolute error à 152.95. sormalizing gives us relative squared errors of 0.023 & 0006 represtively.

3. We get average evros mate of 0.1116

Jen SVD It huncaled).

We get average serve nate of 0.648

Jen ridge regression

Thus midge regression is better have.