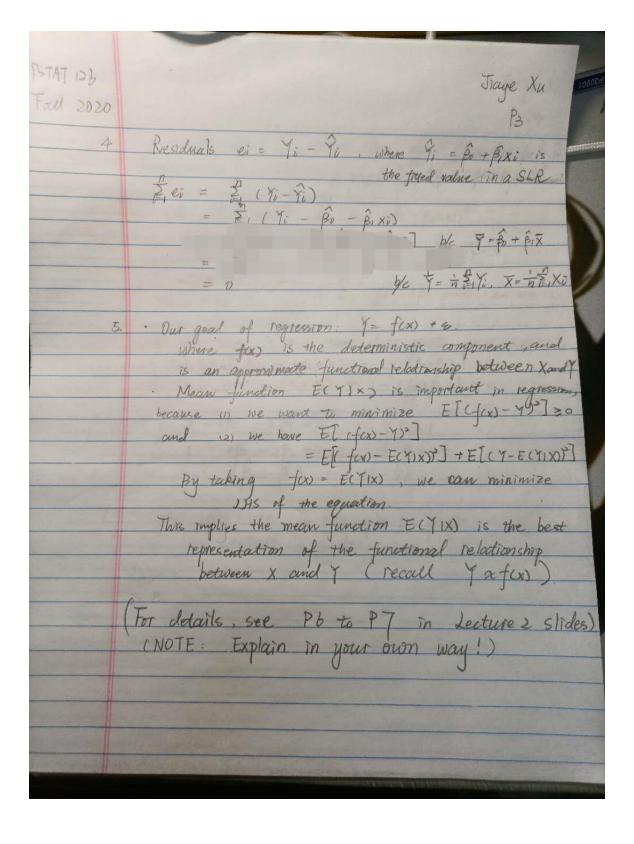


PSTAT 136 Jiaye Xu Fall 2000 HWI Counter example: Let sample space  $S = \{3! \text{ permutation of a,b,c}\}$ Define Ai = Zith place in the triple is occupied P(Ai) = \frac{1}{2}, for i = 1, 2, 3 and P(A, n As) = P(A, nAs) = P(A2 nAs) = 9 Thus A. As Az are pair wise Independent. However, P(A, nA= (1A=) = = = P(A) P(A=) P(A=) So, A., Az, Az are NOT mutually independent. (b) Mutual independence implies pairwise independence By Not of mutual independence, for any Sub collection { Air, Air}, we have

PC Air, Air) = PC Air, PCAir) Yes. Because by = Tinear", we mean we have brearity in parameters, i.e., Bj's, not necessarily in covariates.

(NOTE: You should explain more details, and it's better to give an example.)



Jiaye Xu 194 PSTAT 126 Fall 2020 N.B. Use calculus, rather than derive formulae for  $\hat{p}_0$ ,  $\hat{p}_1$  and  $\hat{p}_0$  and  $\hat{p}_0$  are  $\hat{p}_0$ .  $-2\sum_{n=1}^{N}(y_{n}-(\beta_{0}+\beta_{1}x_{n}))\cdot x_{n}=0$  (2) R example on page Lecture 2 stides