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Fig.	0 1/4 - 10		- 6
11/11/2021	In-Class Problem 12	11 (12 1/x0) - 11/1 =	chistrese
	X X	N,	
	× 90	A: \\\ \2\\\ = 0	
	1910 20		
	lot's Start this prot	lan a by debing	jih a note
\Rightarrow	of the fact that is	PCA DUENC	in tralize
	the dataset first b	· s.lbm oling	it's mean.
12. (4)	the dataset first &	g subra cary	
		and the second s	15.7. 312 Provide the control of the
10 2	So-, x = X+ ture)	where x 15	
		and of is the in	200
	MODEL TEUTO	+-2	
120	<u> </u>	Dr. brlott	
	Now, De define acte	A ophnzation	problem
1	o as , Hamada		
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	How! U is the princi	pal component	LUCRIL
	and Dell is the	offset or the	
	Projection f	and the second s	not the mean).
(/ A	(A) & - 8.A)	An	1101
	4		
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	Page
	Therefore, My:- (wx:+11) 12 is the distance of
	he original
	the original point from it's projection
	on the Principal component.
	J'x X
	X
	x x x
¹ u.	
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4	As we can observe here. Exi here
-	is nothing but the mean of all the projections
\perp	which is equivalent to the mean of
1	all y:'s.
1	
	And we know that the mean of the data
-	is O since we centralized all the points.
	\\ \forall z_{2C}; = 0
-	
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