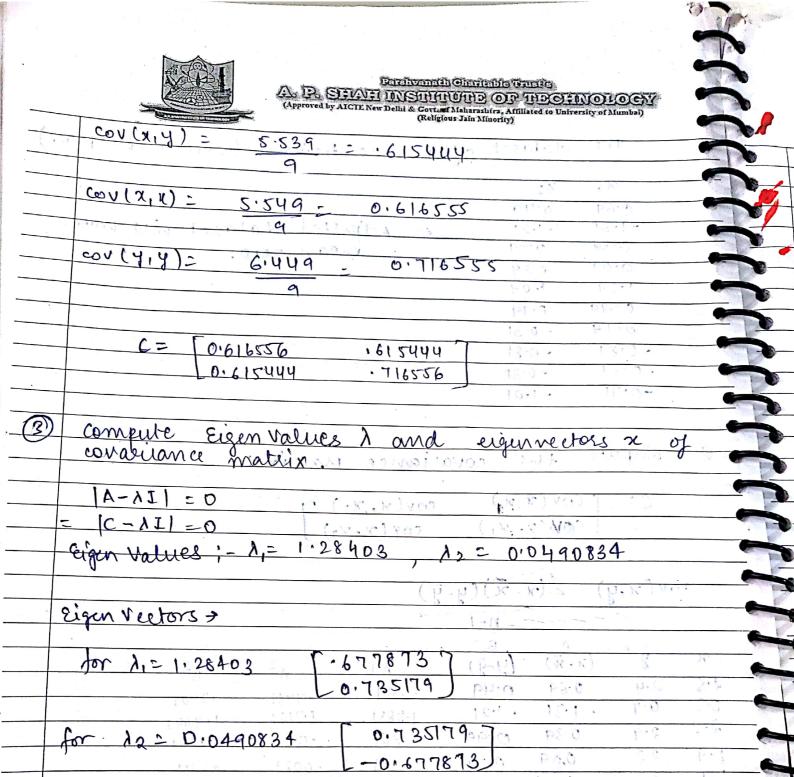
		<b>C</b>	Ţ.,			
					70	3 4 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Computa	tion of	PCA.	<u></u>	• •	x to) for the first of
	3 **		· · · · · · · · · · · · · · · · · · ·			
$\mathbb{Z}^{0}$	Standard	ization o	data:	•		The state of the s
-		41	0	100	A	
-	χ,	22	(\( \text{GP(P)} \)	(60)		7 r & - A
	2.5	2.4	· ·	100	K = 1	
	0.5	0.7		4-1		-
No.	2.2	<u> </u>				good studied as
	3.1	3,0		1		
	2.3	2.7				101 - 18 - 4 = Dy - 2.
	2.0	1.6			1	õ l
_	1.0	1.1	<u> </u>			
-	1.5	1.6				O T X ) 3 A 19 1
	1.1	0.9			C*·	
	0 - 10-	* .		73. 3		10 7 8 15
-	9/2 = 1.81		· · · · · · · · · · · · · · · · · · ·			6 1 1 1 6 1
	121,41	<del></del>		<i>(</i> :-	<del></del>	
4	Subtract 1	he data	D		11 -	10
1	compone	And I	1MP COVI	Joan	the	corresponding data
ÿ	١.	40	· · · · · · · · · · · · · · · · · · ·	4	Ne.	dovalet.
	Prof. Jaya Gupta				1 12	Department of Computer Engineering
		•				



## P. STANTI INSTITUTIVE OF TIPES TO A STANTA OF A STANTA

- 1	3		(A) ared by	· ·	Kengioussanio		
	the	clataset	after	reconte	ring:	zero Mean	Pala)
	26,	22				Z	
	0.69	0:49		1.1 - 1			· .
	-1.31	-1.21	+	- Adjus.	ted dat	aset will b	rave
	0.39	0.99			on zero		13
	0.09	6.29	18511	10	TO DESCRIPTION		
	1.29	1.09			100		
	0.49	0.79					>
	0.19	-0.31					K.
45	-0.81	-0.81	11/1	INCOME.	- W		
- V	-0.31	-0.31	1	- 11.	(1417)	3 10 1	*
	15.0-	-1.01	T .				
						· · · · · · · · · · · · · · · · · · ·	
	V	- 1	112 /	Ma A	2.000	100	
(Q) (	compute	e the	covar	ionce 1	nattip:	('	
-							
	C= 1	con (x ix		20v(x1,x2		- / téx-	1
		COW(x).	x,)	cov (x2x	(4)	W. Ive	-5
	47	RUBLIUM	1 ch	\$ 9 H	10	/ - L ASKUSV	19 6
	1 ° 1 ° 70	1,					
u	ov (x,y)	)= 2(x-	x)(y-y	)			
			N-1	<b>-</b>	. ↓- · · · · · · · · · · · · · · · · · ·	Mr. 2 of Napa	
		Α	. B		And the second		Å
K	y	(x-\bar{\gamma})	(y-y)	A.B	$A^2$	B <sup>2</sup>	1865
2.5	2.4	,	0.49	.3381	1.4761	12401	
2.0	0·7		-1.21	1.5851	1.7161	1.4641	
2.2	3.9	0.39	0.99	.3861	1521	. 9801	B 13%
1.9	2.2	0.09	0.29	0.0261	. 0081	.0841	
3.1	3.0	1.29	1.09	1.4061	1.6641	1.18.81	
	2·7	0:49		·3871			
2.3		7	0.79		-2401	0.6241	
	1.6	0.19	-0:31	0589	0.0361	0.0961	. 1 1
2.0		/* * .	-0.81	1959.	0.6261	16561	-
1.0	1.1	-0.81			12 60.0	.0961	
	1.6	-0.31	-0.31	10961	0 0(2)		
1.0				·7171	0.5041	10201	
1.0	1.6	-0.31	-0.31	.7171	0.5041		
1.0 1.5 1.1	0.9	-0.31	-0.31		5.549	1.0201	2.4



Total sample variance : (sum of eigen Values)

1711 10-1 -

Prof. Jaya Gupta

Department of Computer Engineering

DH. C.



## Paranyamith Chartable Trusts

(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbal)
(Religious Jain Minority)

	(Religious Jain Minority)	0.00
	Var. C. à. AM. I. Cl. G. 1991-1995 1	0 2 3
	21. Eggnivector I	
	. 133	
	2, .735678	1
6.	genValue 1.2840 0.0490	
	gen Value 1.2840 0.0490	**
7. 0	[ total 1.2840/1.333 0.490/1	,223
	Variance - 96.3 1 3.7	
		7.
	et com be seen trat approximately que tal variance is concentrated in eig	211 01 41.0
10	tal Maxiamer in commented in pia	en incotor 1
a	nd 41/2 in eigenvector 2	conved or I
0,0	THE TYPE DAY OF THE PROPERTY O	. /
		1
(4)		
	sort Eigen Malues in discending order:	
Ď-,	V V	
	come Arrange Eigenvectors by Eigen	Values -
Fr	om highests to rowest. This gives t	ue compos
in	order of significance.	300700
	_ cree. of enficience.	
170	re eigenvector with the highest eigen	value is
+0	re principal component of the datas	et.
	components of lesser significance ea	in be 184
1 1	at the second of	
+ Son	re information is lost, but if eigenr	values as
8m		1 some
cov	sponents are left out then the	wind dat
su		HAD AND
200		1 TUL
	ginal.	
	160000000000000000000000000000000000000	
	The state of the s	122 47
,		)
	and the second s	
	• ,	
Prof Ja	ya Gupta Department of Comp	uter Engineering

Prof. Jaya Gupta

Department of Computer Engineering



# Approved by AICTE New Delhi & Govt. of Maharashira, Affiliated to University of Mumbai) (Religious Jain Minority)

_ 75	5) form a teature white	
-	form a feature vector and construct the projection matrix W>	C. C.
	projection matrix W>	1
_	frojection matrix w is calculated by taking the eigenvectors that are choosen and forming a matrix with them in columns.	
	the eigenvectors that are all appears and torming	
	a mateir with traces in	1
	columns.	11
	Here, there are two eigenvectors, so there are 2 choices of matrices.	
	maurice of maurice.	
	* A feature vector can be formed with both the	
	eigenvalues vectors:	
	and the state of t	1
	W, = [.677873 .735149 7	
	[.735779677873]	130
	- The Bully of the Control of the Co	
7	If the smaller, less significant component is left	
V 5 4 7	out, then there will be a grigle column:	
	A STATE OF THE STA	
	W2 = \.677873 7	
	W) - 0 ((0 1)	
	· 7351791)	
-	Imp.	
	Datasit af	chla
6)	Transform the original dataset: Subtraction	Q
	Transform the original dataset: (Subtraction	nean
->-	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
	The new dataset is derived by taking Z = XW.	-
		X I I
	20061 W [677873 .735179]	
(	20sel: W1= 1677873 .735179	
=	20sel: W1= 1677873 .735179 - 677873)	6
	The second secon	
	Final Data = XW,	
	$(Z_1)$	
	· doloret alter lubbrachus	100 100 100 100 100 100 100 100 100 100
	dataset after subtracting	
	the mean.	9
	- CO - La Proince	

Prof. Jaya Gupta

Department of Computer Engineering