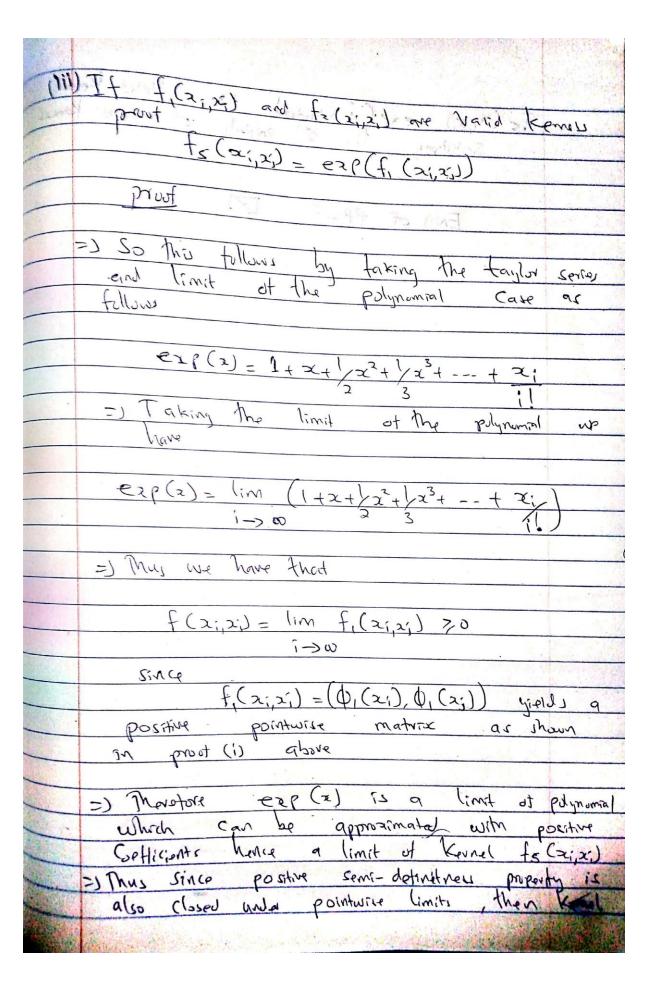
	Validity of Kernels
	We have that for any xi, zi ERP
	(i) $f(x_1, x_2) = (\phi(x_1), \phi(x_2))$
4.3-	yers in a contract of the cont
	ii) for any Set of Vector
	Exist the matrie & bompated by
	$k(i_{i,j}) = f(a_{i,j}a_{i,j})$
2-1	Proof
1	We know that a Kningl is valid or rathor
	well defined if the above said conditions are
	met.
	Met. (D) Symmetria (1) Optible Seni-datale
	(i) positive Semi-detrode
(1)	Now if fi(zi,zi) and fz(zi,zi) are valid
	Komels then
1	$f_3(x_1,x_2) = f_1(x_1,x_2) + f_2(x_1,x_2) = 0$
570 577	for need to note that
	for the following the same of
	f (21,x1) = tq (21,x1) + (b(x1,21)=)
1 dien	(2) (a) = (0,(2), 0,2 (2)) as the feature
4 (- 20	Composition
(41 - 51)	Thus we have in our case
) Thus we have in our case

$f_{2}(x; x') = (0, (x;), 0, (x;))$
(2,), (1, (2))
$f_2(x_i, x_i) = (\phi_2(x_i), \phi_2(x_i))$
3 By the second
2) By the seed property
$f_3(x_{i_1}x_{i_2}) = f_1(x_{i_2}x_{i_2}) + f_2(x_{i_2}x_{i_2})$
$\frac{1}{1}(\lambda_{i},\lambda_{j})+\frac{1}{12}(\lambda_{i},\lambda_{j})$
$=$) $f_3 = f_1 + f_2 70$
$= J\left(\phi_{1}(x_{1}),\phi(x_{2})\right)+\left(\phi_{2}(x_{1}),\phi_{2}(x_{2})\right)$
$=)\left(\left[\phi_{1}(x_{1})\phi_{2}(x_{1})\right],\left[\phi_{1}(x_{2}),\phi_{2}(x_{2})\right]\right),70$
=) So we thorotore see that f3 (x1,21) (nn be
expressed as an inner product
titte 70 which yields a positive
floment wise matrix satisfying the postive
Semi-dethate Phylaty
=> Hence a valid Kernell
When we saw of the same of the
(ii) If f (xi, zi) and f2(xi, zi) are Valid Kenyl
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$f_{\alpha}(x_i, x_i) = f_{\alpha}(x_i, x_i) f_{\alpha}(x_i, x_i)$
prout 1-1
Allow as it will det
Cream materi is
CH 2 (daily day 2 / 1/2 09) = 1 x 4 x 9
given as follows
$f_4 = f_1 \odot f_2$

	Where O is the denotation of Hadamard
10.00	ontra wise product
•	=) By the 2nd property that f, (x; 25) and
	for (xi, xi) are symmetric positive. Semi-definate matrices, then we have
	Semi-definate matrices, Then we have
	The following
*	
	$f(x_i, x_i) = \sum_{x_i \in T} and f_2(x_i, x_i) = \sum_{x_i \in T} x_i$
	i-1 7 3 4 4 4 4 4 5 1-1
) This results into
t	$\mu((x_i,x_i)) = \sum_{i=1}^{N} \sum_{j=1}^{N} (x_j,x_j) \otimes (x_j,x_j)$
	i=1 $i=1$
od most	
	$= \underbrace{\sum \sum (x_i \circ x_j)(x_i \circ x_j)^T}$
2 5152	[2]
34/20 V	afficient to 2 no service of the boards
	$= \sum w_k w_k$
	K=107 long to made co
V	Where Wk = xkm 0 xk mod n.
wist lain	Wirm (crist) of home (cope) + 77 MB
=)	Simplifying trather we have. work.
	(x,x) = 1 (m, 2) (x, x)
	14 (x1,21) = 5 WKWK! = 5 (WK) 7,0
	K=1 K=(1000)
THE PARTY OF THE P	This is a valid Komel since we end
Control of the Contro	with and summation with rank 1 with
	positive (or HECTANTIC CONTINUES MANIES
W.	
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