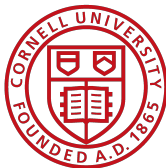


# Presentation title here

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# Mercer's theorem

## Eigendecomposition of a kernel

A continuous function  $K : ([0, 1] \times [0, 1]) \rightarrow \mathbb{R}$  is a *kernel* if it is:

- Symmetric:  $K(a, b) = K(b, a)$
- Positive semi-definite:

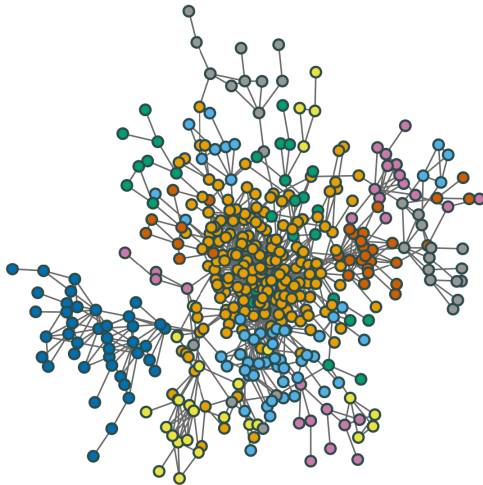
$$\sum_{i=1}^n \sum_{j=1}^n K(x_i, x_j) c_i c_j \geq 0$$

for all  $x_1, \dots, x_n \in [0, 1]$  and  $c_1, \dots, c_n \in \mathbb{R}$

Now define an integral operator on  $\mathcal{L}^2[0, 1]$  using  $K$ :

$$(T_K f)(x) = \int_0^1 K(x, s) f(s) ds$$

## Example image



# References



Paper 1 Title.

Paper 1 Authors.

*Journal Name* Edition, Year.



Paper 2 Title.

Paper 2 Authors.

arXiv:1234.56789.

Thank you for listening!

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