Twitter Thread by Pratham Prasoon



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Do you want to learn the maths for machine learning but don't know where to start?

This thread is for you.

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The guide that you will see below is based on resources that I came across, and some of my experiences over the past 2 years or so.

I use these resources and they will (hopefully) help you in understanding the theoretical aspects of machine learning very well.

Before diving into maths, I suggest first having solid programming skills in Python.

Read this thread for more details■

https://t.co/sSN3jdxDwK

> Are you planning to learn Python for machine learning this year?
>
> Here's everything you need to get started.
> \U0001f9f5\U0001f447
>
> — Pratham Prasoon (@PrasoonPratham) February 13, 2021

These are topics of math you'll have to focus on for machine learning■

- Trigonometry & Algebra

These are the main pre-requisites for other topics on this list.

(There are other pre-requites but these are the most common)

- Linear Algebra

To manipulate and represent data.

- Calculus

To train and optimize your machine learning model, this is very important.

- Statistics

Make "sense" out of the data you have.

- Probability

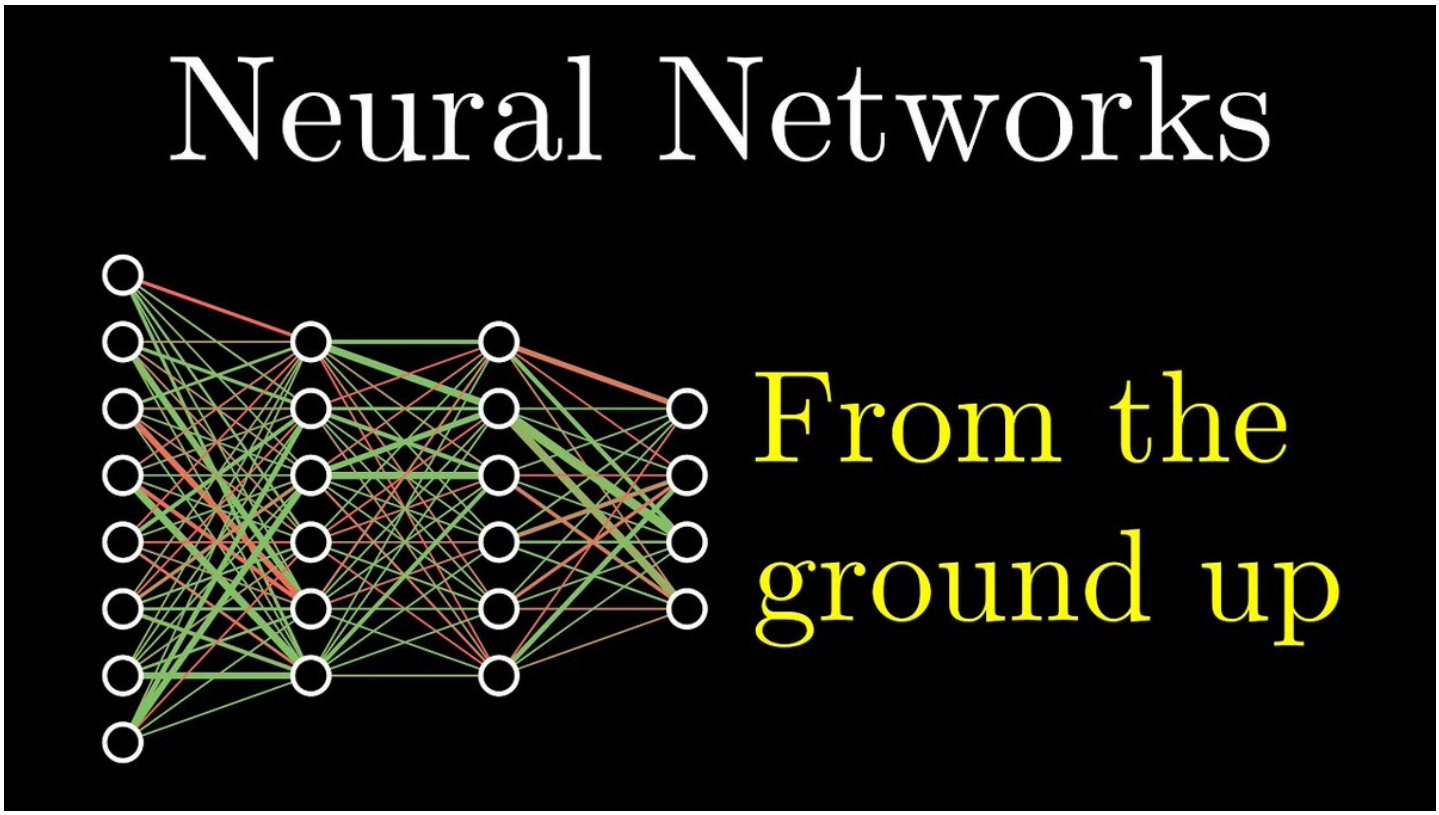
Make decisions under uncertainty.

These are some of the resources I recommend for learning these topics ■

Neural Networks

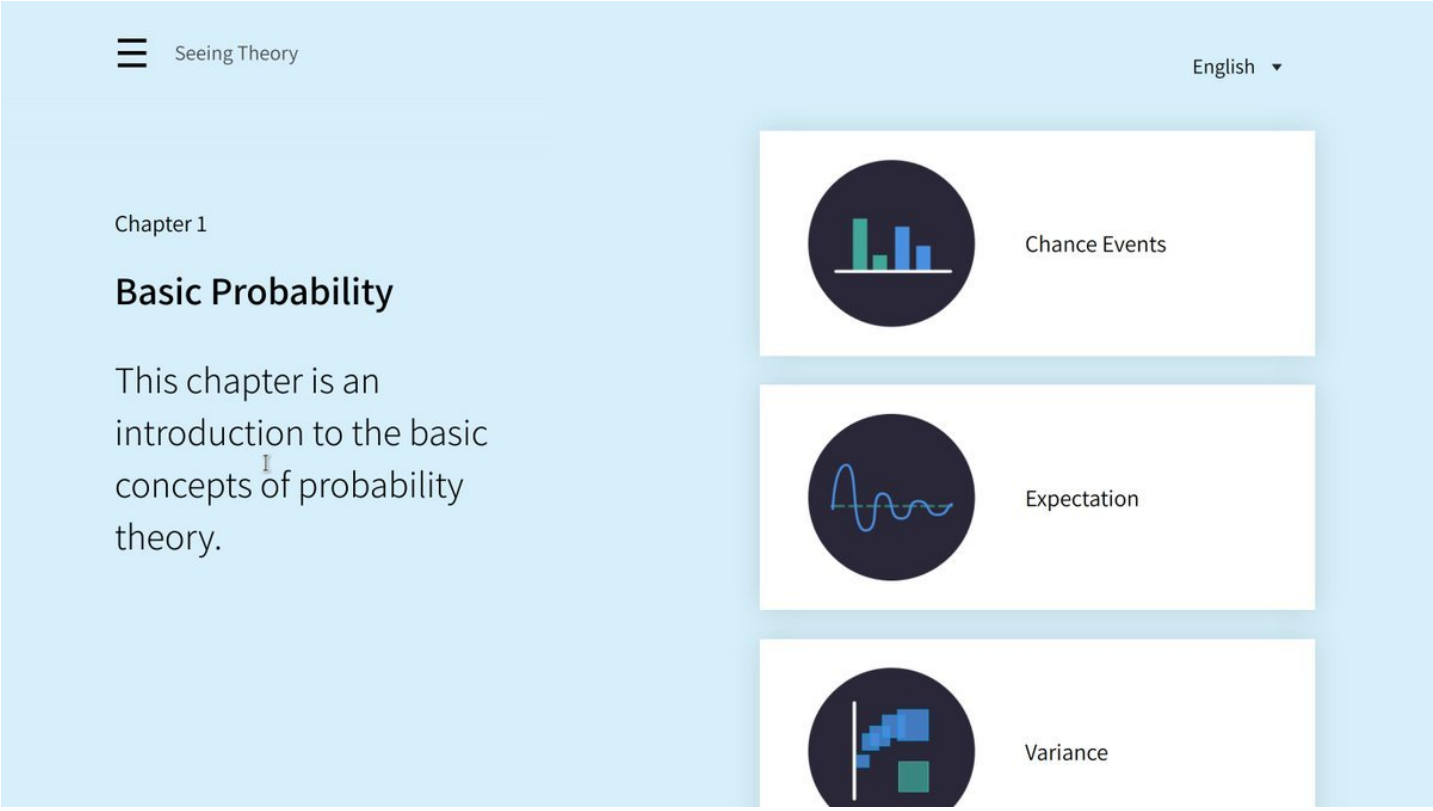
> A series of videos that go over how neural networks work with approach visual, must watch.

■youtu.■be/aircAruvnKk



Seeing Theory
> This website helps you learn statistics and probability in an intuitive way.

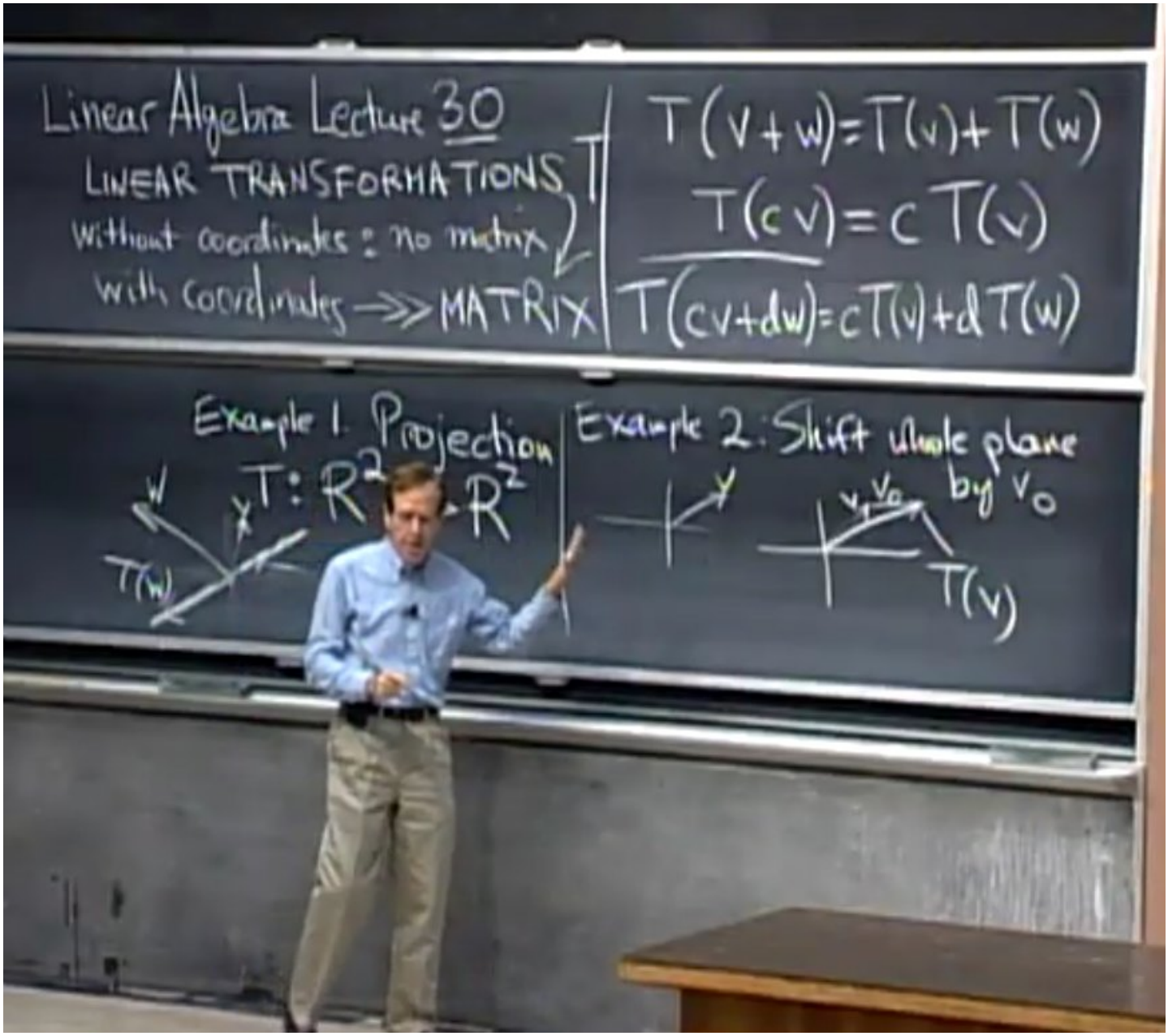
■seeing-theory.■brown.■edu/basic-probability/index.■html



Gilbert Strang's lectures on Linear Algebra (MIT)

> This is 15 years old but still 100% relevant today!
Despite the fact these lectures are made for freshman college students at MIT, I found it very easy to follow■

■youtube.■com/playlist?list=PL49CF3715CB9EF31D



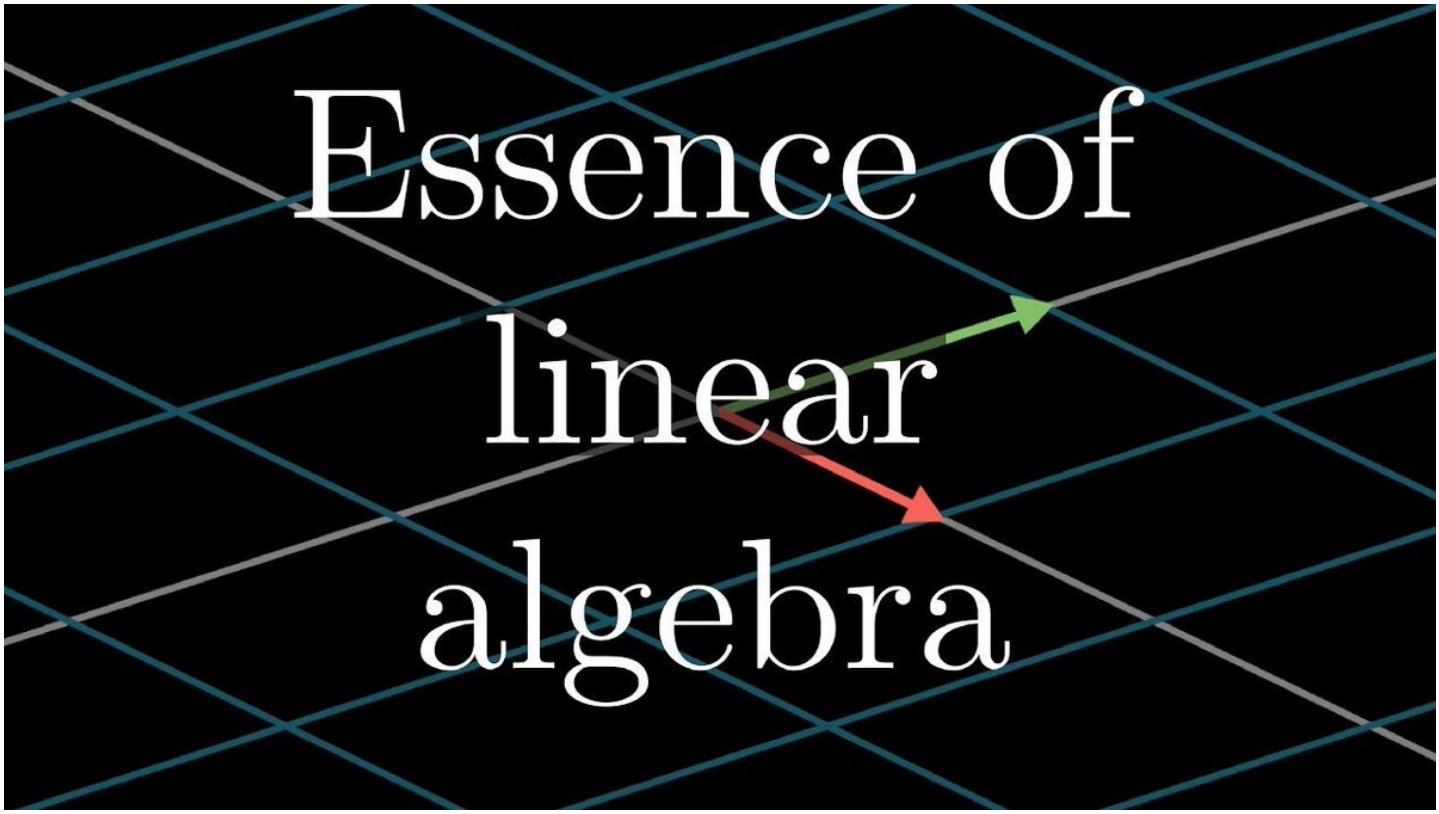
My Thread on Linear Algebra.

https://t.co/3H7U2HJgTd

> This is a beginner-friendly introduction to:
>
> Linear Algebra for Machine Learning.
>
> \U0001f9f5\U0001f447
>
> — Pratham Prasoon (@PrasoonPratham) January 24, 2021

The essence of Linear Algebra
> A beautiful playlist of videos which teach you linear algebra through visualisations in an easy to digest manner.

■youtube.■com/watch?v=fNk_zzaMoSs&list=PLZHQObOWTQDPD3MizzM2xVFitgF8hE_ab



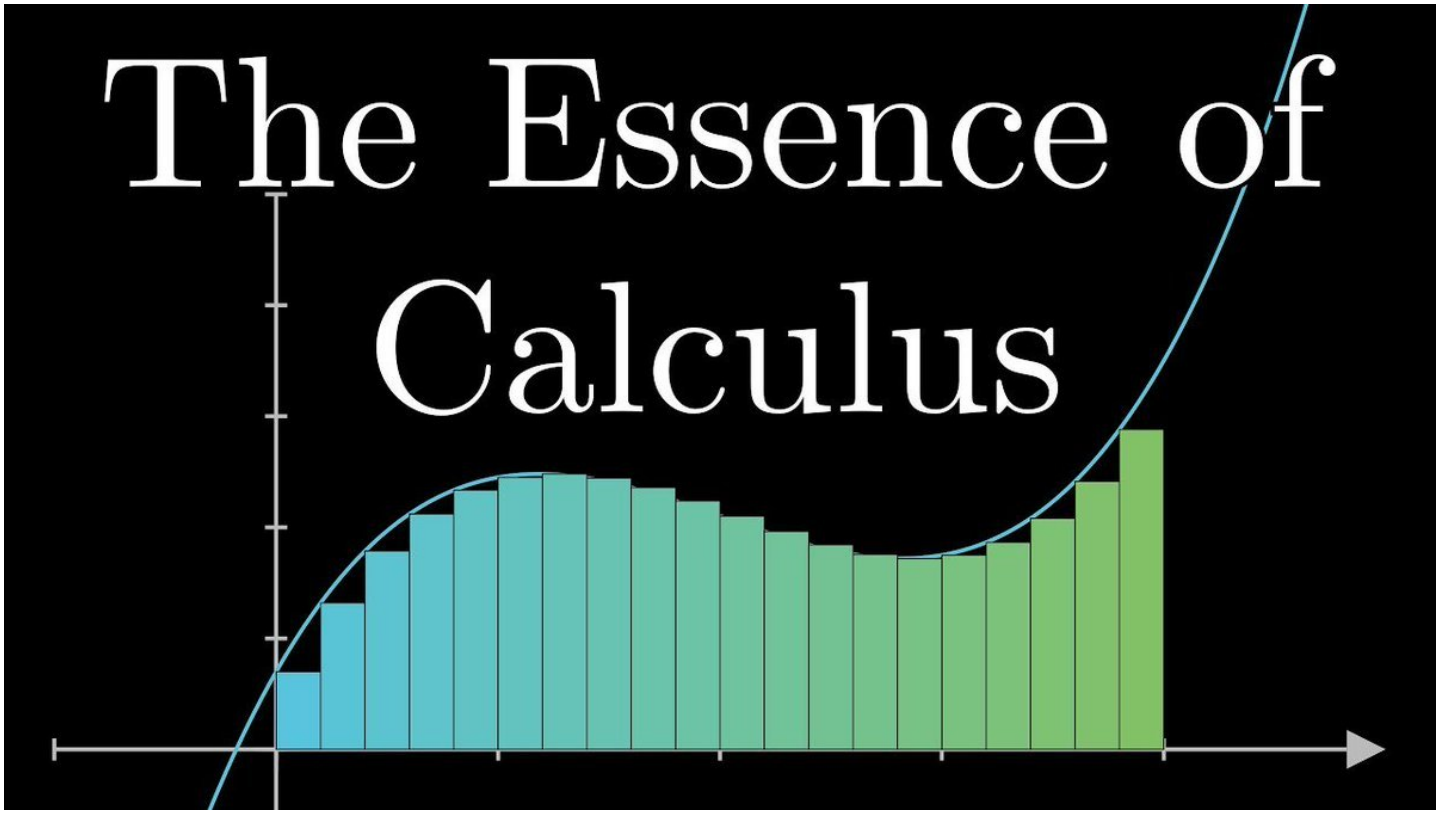
Khan Academy
>You'll find a course on everything here! Khan Academy is the first place I'll go to when I want to learn something.

■khanacademy.■org/math



Essence of calculus
> A beautiful series on calculus, makes everything seem super simple.

■youtube.■com/watch?v=WUvTyaaNkzM&list=PL0-GT3co4r2wlh6UHTUeQsrf3mlS2lk6x



The math for Machine learning e-book

> This book is for someone who knows quite a decent amount of high school math like trigonometry, calculus, I suggest reading this after having the fundamentals down on khan academy.

■mml-book.■github.■io

