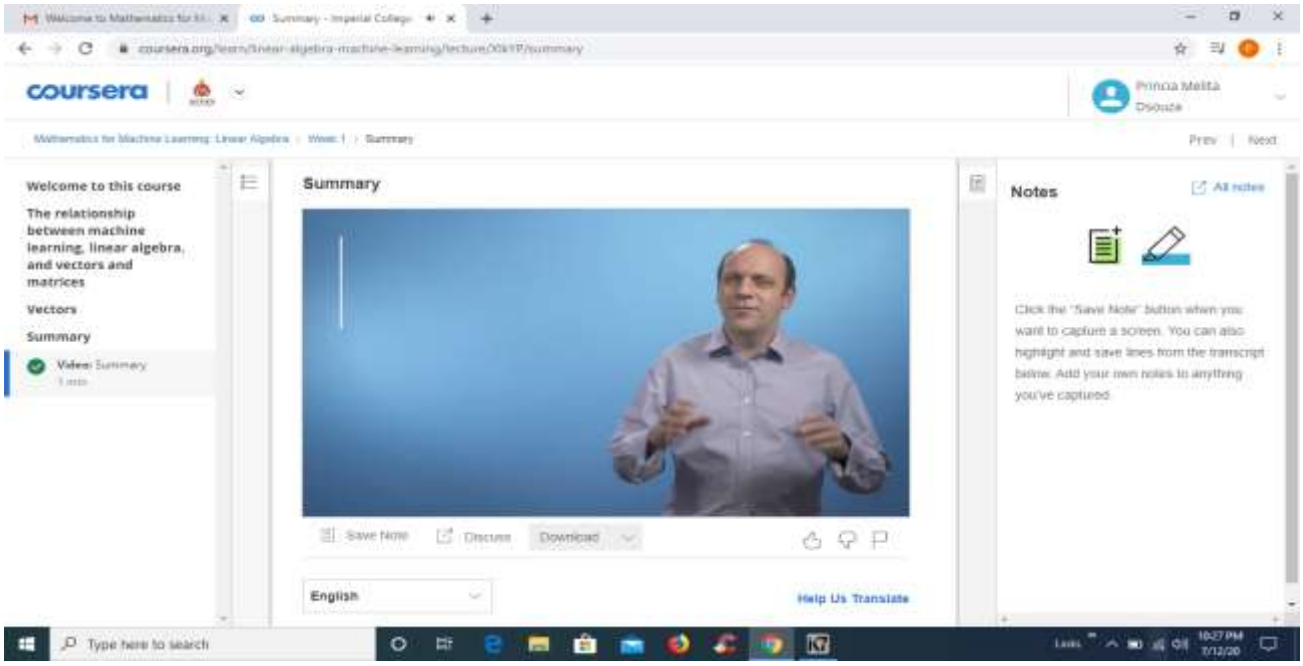
DAILY ASSESSMENT FORMAT

Date:	**17-07-2020**	**Name:**	**Princia melita dsouza**
Course:	**coursera**	**USN:**	**4al17ec075**
Topic:	**Linear algebra**	**Semester & Section:**	**6th b**
Github Repository:	**MELITA-1999**		

FORENOON SESSION DETAILS

Image of session



Report – Report can be typed or hand written for up to two pages.

Linear Algebra for Machine Learning

by **Jason Brownlee** on December 24, 2014 in **Linear Algebra**
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Last Updated on August 9, 2019

You do not need to learn linear algebra before you get started in machine learning, but at some time you may wish to dive deeper.

In fact, if there was one area of mathematics I would suggest improving before the others, it would be linear algebra. It will give you the tools to help you with the other areas of mathematics required to understand and build better intuitions for machine learning algorithms.

In this post we take a closer look at linear algebra and why you should make the time to improve your skills and knowledge in linear algebra if you want to get more out of machine learning.

If you already know your way around Eigen Vectors and SVD, this post is probably not for you. Discover vectors, matrices, tensors, matrix types, matrix factorization, PCA, SVD and much more in my new book, with 19 step-by-step tutorials and full source code.
Let's get started.

What is Linear Algebra

Linear Algebra is a branch of mathematics that lets you concisely describe coordinates and interactions of planes in higher dimensions and perform operations on them.

Think of it as an extension of algebra (dealing with unknowns) into an arbitrary number of dimensions. Linear Algebra is about working on linear systems of equations (linear regression is an example: $y = Ax$). Rather than working with scalars, we start working with matrices and vectors (vectors are really just a special type of matrix).

For a lot of higher level courses in Machine Learning and Data Science, you find you need to freshen up on the basics in mathematics - stuff you may have studied before in school or university, but which was taught in another context, or not very intuitively, such that you struggle to relate it to how it's used in Computer Science. This specialization aims to bridge that gap, getting you up to speed in the underlying mathematics, building an intuitive understanding, and relating it to Machine Learning and Data Science.

In the first course on Linear Algebra we look at what linear algebra is and how it relates to data. Then we look through what vectors and matrices are and how to work with them.

The second course, Multivariate Calculus, builds on this to look at how to optimize fitting functions to get good fits to data. It starts from introductory calculus and then uses the matrices and vectors from the first course to look at data fitting.

The third course, Dimensionality Reduction with Principal Component Analysis, uses the mathematics from the first two courses to compress high-dimensional data. This course is of intermediate difficulty and will require Python and numpy knowledge.

At the end of this specialization you will have gained the prerequisite mathematical knowledge to continue your journey and take more advanced courses in machine learning.

Date:	**17-07-2020**	**Name:**	**Princia melita dsouza**
Course:	**salesforce**	**USN:**	**4al17ec075**
Topic:		**Semester & Section:**	**6th b**

AFTERNOON SESSION DETAILS
Image of session


3:23 PM
+1,900 POINTS
Trail
Build Your Career in the Salesforce Ecosystem
Create a career plan, build communication skills, and earn credentials to succeed in the Salesforce Ohana.
~4 hrs 25 mins
+400 POINTS
Module

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Summary

In this course on Linear Algebra we look at what linear algebra is and how it relates to vectors and matrices. Then we look through what vectors and
matrices are and how to work with them, including the knotty problem of eigenvalues and eigenvectors, and how to use these to solve problems.
Finally we look at how to use these to do fun things with datasets - like how to rotate images of faces and how to extract eigenvectors to look at how
the Pagerank algorithm works.