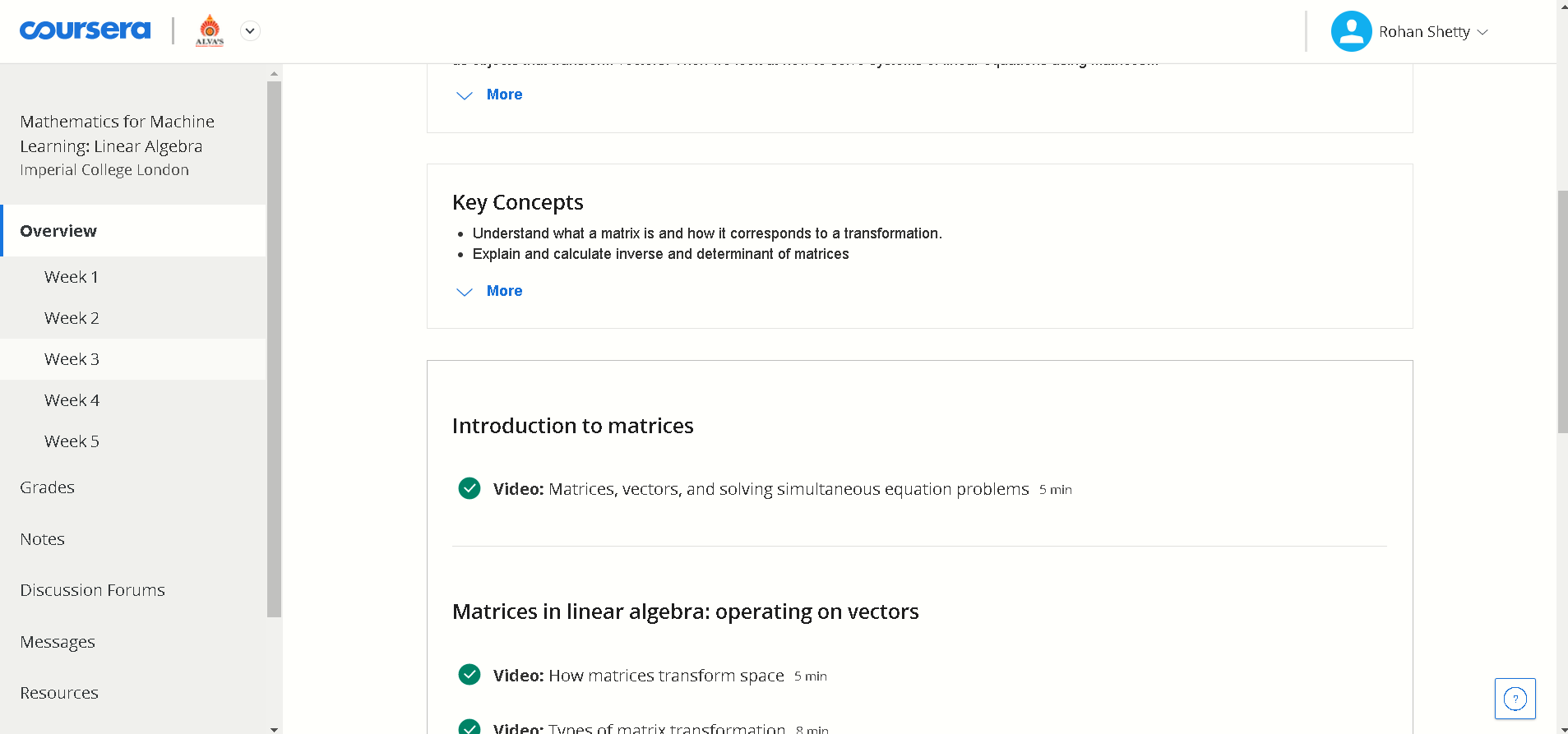
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| Date: | **16-07-2020** | Name: | **Varun G Shetty** |
| Course: | **Coursera** | USN: | **4AL17EC093** |
| Topic: | * Mathematics for machine learning: Linear Algebra | Semester & Section: | **6th & ‘B’** |
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**Report-**



Almost every branch of physics, including classical mechanics, optics, electromagnetism, quantum mechanics, and quantum electrodynamics, matrices are used to study physical phenomena, such as the motion of rigid bodies. Matrices have also come to have important applications in computer graphics, where they have been used to represent rotations and other transformations of images. is a 2 ×3matrix.

A matrix with n rows and n columns is called a square matrix of order n Matrices are classified according to the number of rows and columns, and the specific elements therein.

(i) Row Matrix: A matrix which has exactly one row is called a row matrix. The above two matrices are row matrices because each has only one row. Matrices are a useful way to represent, manipulate and study linear maps between finite dimensional vector spaces (if you have chosen basis).

Matrices can also represent quadratic forms(it's useful, for example, in analysis to study hessian matrices, which help us to study the behaviour of critical points).The numbers in a matrix can represent data, and they can also represent mathematical equations.

Even more frequently, they're called upon to multiply matrices. Matrix multiplication can be thought of as solving linear equations for particular variables. The series primarily consists of a trilogy of science fiction action films beginning with The Matrix(1999) and continuing with two sequels, The Matrix Reloaded and The Matrix Revolution(both in 2003), all written and directed by the Wachowskis and produced by Joel Silver.

The term matrix was introduced by the 19th-century English mathematician James Sylvester, but it was his friend the mathematician Arthur Cayley who developed the algebraic aspect of matrices in two papers in the 1850s.In biology, matrix is the material(or tissue) in animal or plant. Structure of connective tissues is an extra cellular matrix. It is found in various connective tissue. It is generally used as a jelly like structure instead of cytoplasm in connective tissue.