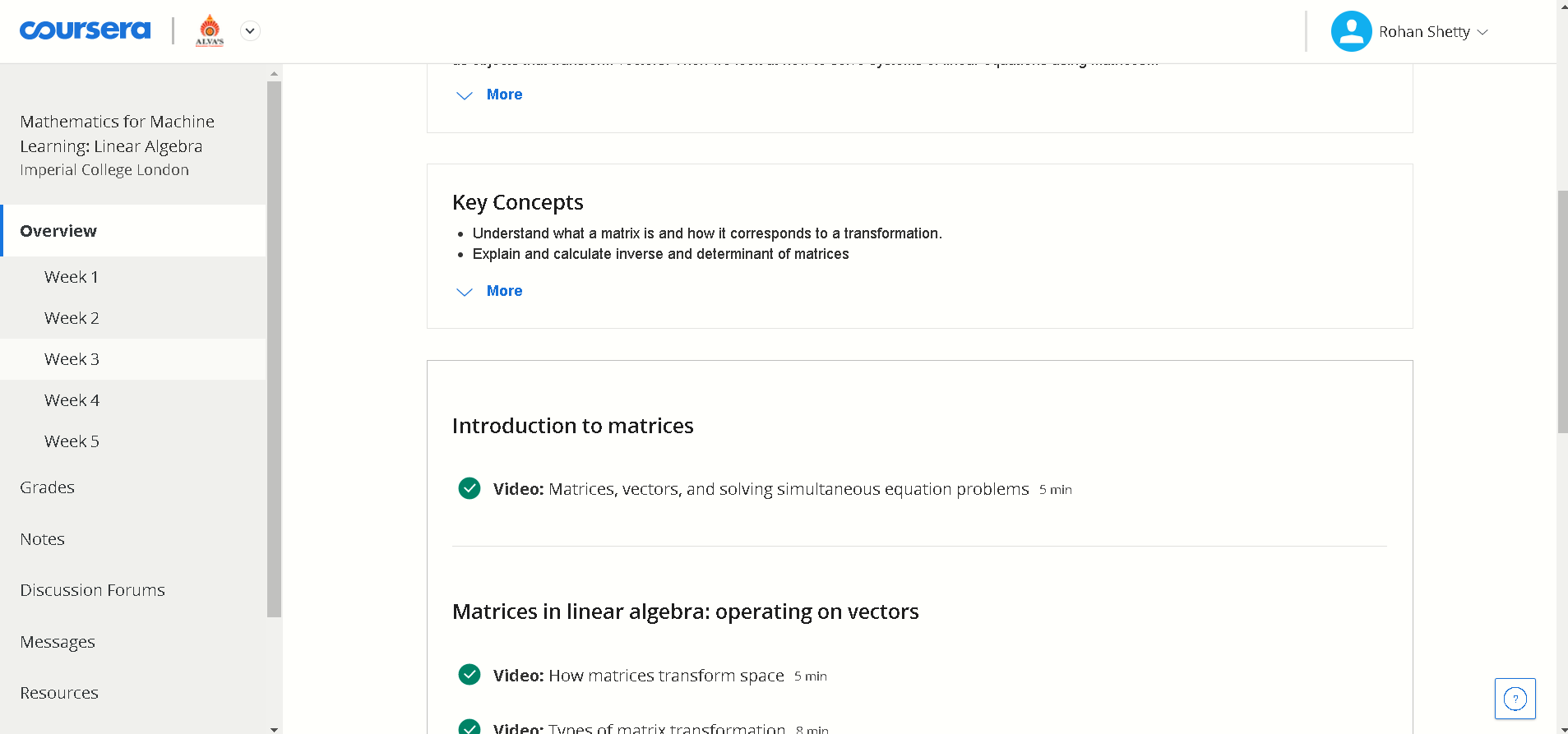
|  |  |  |  |
| --- | --- | --- | --- |
| Date: | **16-07-2020** | Name: | **Rachana C Hulikatti** |
| Course: | **Coursera** | USN: | **4AL17EC108** |
| Topic: | * Mathematics for machine learning: Linear Algebra | Semester & Section: | **6th& ‘B’** |
|  |  |  |  |

**Report-**



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

Amatrixwith n rows and n columns is called asquarematrixof order nMatricesare classified according to the number of rows andcolumns, and the specific elements therein.

(i) RowMatrix:Amatrixwhich has exactly one row is called a rowmatrix.The above twomatricesare rowmatricesbecause each hasonly one row.Matricesare ausefulway to represent, manipulate and studylinear maps between finite dimensional vector spaces (if youhave chosen basis).

Matricescan also represent quadraticforms(it'suseful, for example, in analysis to studyhessianmatrices, which help us to study the behaviourofcritical points).The numbers in amatrixcan represent data, and they canalso representmathematicalequations.

Even morefrequently,they'recalledupontomultiplymatrices.Matrixmultiplication can be thought of assolving linear equations for particular variables.The series primarily consists of a trilogy of science fictionaction films beginning with TheMatrix(1999) andcontinuing with two sequels, TheMatrix Reloaded andTheMatrix Revolution(both in2003), all written anddirected by the Wachowskis and produced by Joel Silver.

The termmatrixwas introduced by the 19th-century English mathematician James Sylvester, but it was his friend themathematician Arthur Cayley who developed the algebraicaspect ofmatrices in two papers in the 1850s.In biology, matrix is the material(or tissue) in animal or plant. Structure of connective tissues is anextracellular matrix. It is found in various connectivetissue. It is generally used as a jelly like structure instead ofcytoplasm in connective tissue.