**DAILY ASSESSMENT FORMAT**

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| **Date:** | **10-07-2020** | **Name:** | **Kavya M M** |
| **Course:** | **Mathematics for machine learning: Linear algebra** | **USN:** | **4AL17EC040** |
| **Topic:** | **The relationship between machine learning, linear algebra, and vectors and matrices** | **Semester & Section:** | **6th A** |
| **Github Repository:** | **Kavya\_ECE040** |  |  |

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| **FORENOON SESSION DETAILS** |
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| **Linear algebra** is a sub-field of mathematics concerned with vectors, matrices,  and linear transforms. It is a key foundation to the field of machine learning, from notations used to describe the operation of algorithms to the implementation of algorithms in code  Although linear algebra is integral to the field of machine learning, the tight relationship is often left unexplained or explained using abstract concepts such as vector spaces or specific matrix operations.  In this post, you will discover 10 common examples of machine learning that you may be familiar with that use, require and are really best understood using linear algebra.  After reading this post, you will know:   The use of linear algebra structures when working with data, such as tabular datasets and images.   Linear algebra concepts when working with data preparation, such as one hot encoding and dimensionality reduction.   The ingrained use of linear algebra notation and methods in sub-fields such as deep learning, natural language processing, and recommender systems.  The math includes at least calculus, statistics, probability theory. and linear algebra. Numerical analysis and something like topology will help if you want to create your own algorithms or tackle deep learning.  Linear algebra is absolutely key to understanding the calculus and statistics you need in machine  learning.  Deeper Intuition: If you can understand machine learning methods at the level of  vectors and matrices, you will improve your intuition for how and when they work  **Definition of linear algebra**: a branch of mathematics that is concerned with mathematical structures closed under the operations of addition and scalar multiplication and that includes the theory of systems of linear equations, matrices, determinants, vector spaces, and linear transformations.  Linear algebra plays a major role in Artificial Intelligence and machine Learning. In various machine learning algorithms like supervised learning and unsupervised learning, to calculate inputs and to train the machines with the characteristics and expected outputs. |