DAILY ASSESSMENT FORMAT

Date:	13 JULY 2020	Name:	PAVITHRAN S
Course:	Mathematics for Machine Learning: Linear Algebra	USN:	4AL17EC068
Topic:	Mathematics for Machine Learning: Linear Algebra	Semester & Section:	6TH B
Github Repository:	Pavithran		

FORENOON SESSION DETAILS
Image of session
Report – Report can be typed or hand written for up to two pages. 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).

Broadly speaking, in linear algebra data is represented in the form of linear equations. These linear equations are in turn represented in the form of matrices and vectors.

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.

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.

1. Dataset and Data Files

In machine learning, you fit a model on a dataset.

This is the table-like set of numbers where each row represents an observation and each column represents a feature of the observation.

For example, below is a snippet of the Iris flowers dataset:

1 5.1,3.5,1.4,0.2,Iris-setosa

2 4.9,3.0,1.4,0.2,Iris-setosa

3 4.7,3.2,1.3,0.2,Iris-setosa

4 4.6,3.1,1.5,0.2,Iris-setosa
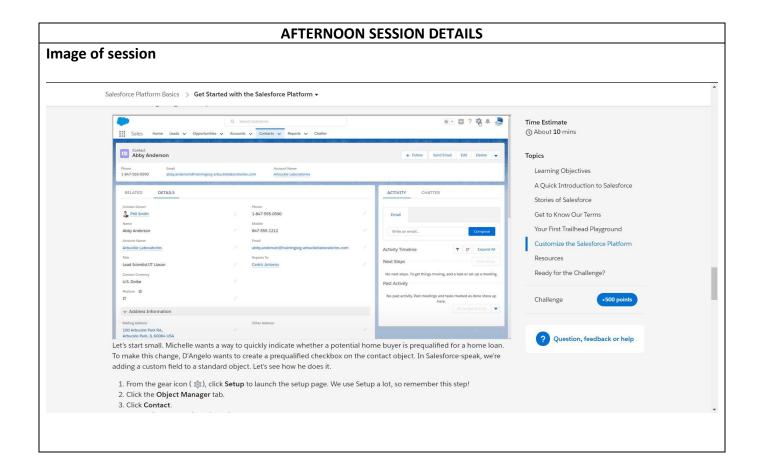
5 5.0,3.6,1.4,0.2,Iris-setosa

This data is in fact a matrix: a key data structure in linear algebra.

Further, when you split the data into inputs and outputs to fit a supervised machine learning model, such as the measurements and the flower species, you have a matrix (X) and a vector (y). The vector is another key data structure in linear algebra.

Each row has the same length, i.e. the same number of columns, therefore we can say that the data is vectorized where rows can be provided to a model one at a time or in a batch and the model can be pre-configured to expect rows of a fixed width.

Date:	13 JULY 2020	Name:	PAVITHRAN S
Course:	SALESFORCE	USN:	4AL17EC068
Topic:	ADMIN	Semester & Section:	6TH B
Github Repository:	Pavithran		

AFTERNOON SESSION DETAILS
Image of session

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

What does a Salesforce Administrator do?

Salesforce Administrators work with stakeholders to define requirements and to customize the platform. To put it simply: they enable users to get the most out of Salesforce.

A Salesforce Admin best understands how to make the platform work for their company's unique needs. Some companies may employ many people in this role. A Salesforce Administrator's colleagues can rely on them to:

- Maintain the platform

- Make it as easy as possible for users of any technical level to use Salesforce

- Stay updated on the platform's new tools, capabilities, and updates

Think of Salesforce Administrators as your trusted advisors on all things Salesforce. They are a vital bridge between business and technology.

At some companies, these administrator jobs are combined with other roles. However, depending on their needs, some companies hire for this role specifically. Because of our platform's capabilities, having someone with an admin certification can ensure the company is using the platform to its fullest potential.

Take, for example, your sales team. They might use Sales Cloud to keep track of opportunities and close deals. With the help of a Salesforce Admin, your salespeople can set up personalized dashboards, fields, alerts, and reports to shorten the sales cycle and track every lead in greater detail. This level of organization can lead to greater satisfaction among salespeople and new customers.

And that's just one department. We have solutions for just about every team in a company, including sales, marketing, customer service, and more. Each department can learn from the Salesforce Admin how to use our platform most effectively.

How can you become a Salesforce Admin?

A Salesforce Admin doesn't need a technical background. A variety of professionals decide to become admins, from those with in-depth technical knowledge to former school secretaries.

Before scheduling your exam, we recommend certificate candidates have six months to one year of experience using Salesforce. The Salesforce Certified Administrator exam takes 115–125

hours to prepare for.

Examples of the concepts covered on the certification exam are:

- Managing users, data, and security

- Maintaining and customizing Sales Cloud and Service Cloud apps

- Building reports, dashboards, and workflows

To become a credentialed Salesforce Administrator, you don't need any other certifications. However, if you choose to become an Advanced Administrator, you'll need to start with your Administrator Certificate. The Advanced Administrator exam builds on your Salesforce Admin knowledge and deepens it.

How to prep for the Salesforce Administrator certification exam

Future admins can prepare for their credentials in a few ways. One important resource is Trailhead, our fun, free way to learn Salesforce. With Trailhead, you can learn at your own pace, using guided learning paths. Trailhead also has a community of fellow learners, and members are known as Trailblazers. You can join the Trailblazer Community to learn together, get answers, and collaborate.

Administrators can also learn from the Salesforce Admin YouTube channel. The channel has videos that show what the role entails, as well as recorded webinars, educational videos, and more. There are also many other online and offline resources, including blog posts, podcast episodes, events, and webinars.

Trailhead walks you through the courses and steps necessary to learn and study for the certification. Once you're ready, sign-up for the exam, which is 60 multiple-choice or multiple-select questions and five non-scored questions. Test takers have 105 minutes, or just over an hour and a half, and must score 65% or higher to pass.

After you pass the test, you're a certified Salesforce administrator, and your career opportunities have expanded. But your learning doesn't stop there. You must maintain your certification on a specific schedule, or it will expire.

Salesforce Admins do a lot of work to stay current in their knowledge, skills, and abilities with our tools. This is one reason why this certification is well-regarded among recruiters and industry leaders.