

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

The screenshot shows a Coursera video player interface. The video is titled "Motivations for linear algebra" and is part of the "Mathematics for Machine Learning: Linear Algebra" course. The video player shows a man speaking, with handwritten equations $2a + 3b = 8$ and $10a + 1b = 13$ on the screen. The video player includes a sidebar with course navigation, a notes panel on the right, and a transcript at the bottom.

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.

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

AFTERNOON SESSION DETAILS	
13:00-13:30	Registration and Welcome
13:30-14:00	Keynote: The Future of AI in Healthcare
14:00-14:30	Panel Discussion: Ethical Implications of AI
14:30-15:00	Break and Networking
15:00-15:30	Workshop: Hands-on AI Model Training
15:30-16:00	Guest Lecture: AI in Drug Discovery
16:00-16:30	Panel Discussion: AI in Education
16:30-17:00	Break and Networking
17:00-17:30	Workshop: AI for Social Good
17:30-18:00	Guest Lecture: AI in Finance
18:00-18:30	Panel Discussion: AI in Marketing
18:30-19:00	Break and Networking
19:00-19:30	Workshop: AI in Cybersecurity
19:30-20:00	Guest Lecture: AI in Law
20:00-20:30	Panel Discussion: AI in Sports
20:30-21:00	Break and Networking
21:00-21:30	Workshop: AI in Agriculture
21:30-22:00	Guest Lecture: AI in Energy
22:00-22:30	Panel Discussion: AI in Transportation
22:30-23:00	Break and Networking
23:00-23:30	Workshop: AI in Space Exploration
23:30-24:00	Guest Lecture: AI in Climate Change
24:00-24:30	Panel Discussion: AI in Entertainment
24:30-25:00	Break and Networking
25:00-25:30	Workshop: AI in Manufacturing
25:30-26:00	Guest Lecture: AI in Retail
26:00-26:30	Panel Discussion: AI in Logistics
26:30-27:00	Break and Networking
27:00-27:30	Workshop: AI in Telecommunications
27:30-28:00	Guest Lecture: AI in Media
28:00-28:30	Panel Discussion: AI in Gaming
28:30-29:00	Break and Networking
29:00-29:30	Workshop: AI in Real Estate
29:30-30:00	Guest Lecture: AI in Insurance
30:00-30:30	Panel Discussion: AI in Banking
30:30-31:00	Break and Networking
31:00-31:30	Workshop: AI in Aviation
31:30-32:00	Guest Lecture: AI in Maritime
32:00-32:30	Panel Discussion: AI in Defense
32:30-33:00	Break and Networking
33:00-33:30	Workshop: AI in Aerospace
33:30-34:00	Guest Lecture: AI in Space Exploration
34:00-34:30	Panel Discussion: AI in Climate Change
34:30-35:00	Break and Networking
35:00-35:30	Workshop: AI in Manufacturing
35:30-36:00	Guest Lecture: AI in Retail
36:00-36:30	Panel Discussion: AI in Logistics
36:30-37:00	Break and Networking
37:00-37:30	Workshop: AI in Telecommunications
37:30-38:00	Guest Lecture: AI in Media
38:00-38:30	Panel Discussion: AI in Gaming
38:30-39:00	Break and Networking
39:00-39:30	Workshop: AI in Real Estate
39:30-40:00	Guest Lecture: AI in Insurance
40:00-40:30	Panel Discussion: AI in Banking
40:30-41:00	Break and Networking
41:00-41:30	Workshop: AI in Aviation
41:30-42:00	Guest Lecture: AI in Maritime
42:00-42:30	Panel Discussion: AI in Defense
42:30-43:00	Break and Networking
43:00-43:30	Workshop: AI in Aerospace
43:30-44:00	Guest Lecture: AI in Space Exploration
44:00-44:30	Panel Discussion: AI in Climate Change
44:30-45:00	Break and Networking
45:00-45:30	Workshop: AI in Manufacturing
45:30-46:00	Guest Lecture: AI in Retail
46:00-46:30	Panel Discussion: AI in Logistics
46:30-47:00	Break and Networking
47:00-47:30	Workshop: AI in Telecommunications
47:30-48:00	Guest Lecture: AI in Media
48:00-48:30	Panel Discussion: AI in Gaming
48:30-49:00	Break and Networking
49:00-49:30	Workshop: AI in Real Estate
49:30-50:00	Guest Lecture: AI in Insurance
50:00-50:30	Panel Discussion: AI in Banking
50:30-51:00	Break and Networking
51:00-51:30	Workshop: AI in Aviation
51:30-52:00	Guest Lecture: AI in Maritime
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60:00-60:30	Panel Discussion: AI in Banking
60:30-61:00	Break and Networking
61:00-61:30	Workshop: AI in Aviation
61:30-62:00	Guest Lecture: AI in Maritime
62:00-62:30	Panel Discussion: AI in Defense
62:30-63:00	Break and Networking
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64:30-65:00	Break and Networking
65:00-65:30	Workshop: AI in Manufacturing
65:30-66:00	Guest Lecture: AI in Retail
66:00-66:30	Panel Discussion: AI in Logistics
66:30-67:00	Break and Networking
67:00-67:30	Workshop: AI in Telecommunications
67:30-68:00	Guest Lecture: AI in Media
68:00-68:30	Panel Discussion: AI in Gaming
68:30-69:00	Break and Networking
69:00-69:30	Workshop: AI in Real Estate
69:30-70:00	Guest Lecture: AI in Insurance
70:00	

Image of session

Let's start small. Michelle wants a way to quickly indicate whether a potential home buyer is prequalified for a home loan. To make this change, D'Angelo wants to create a prequalified checkbox on the contact object. In Salesforce-speak, we're adding a custom field to a standard object. Let's see how he does it.

1. From the gear icon (⚙️), click **Setup** to launch the setup page. We use Setup a lot, so remember this step!
2. Click the **Object Manager** tab.
3. Click **Contact**.

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.