DAILY ASSESSMENT REPORT

Date:	14 July 2020	Name:	Gagan M K
Course:	Mathematics for Machine Learning: Linear Algebra	USN:	4AL17EC032
Topic:	• Vectors	Semester & Section:	6th sem & 'A' sec
GitHub Repository:	Alvas-education-foundation/Gagan-Git		

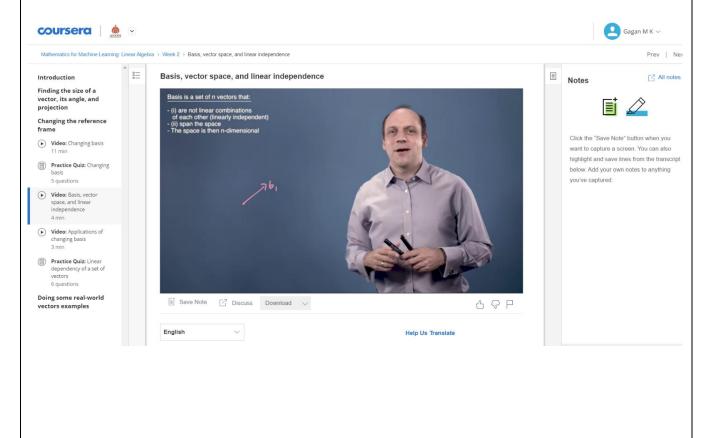| FORENOON SESSION DETAILS |
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| **Image of session**
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Report – Report can be typed or hand written for up to two pages.
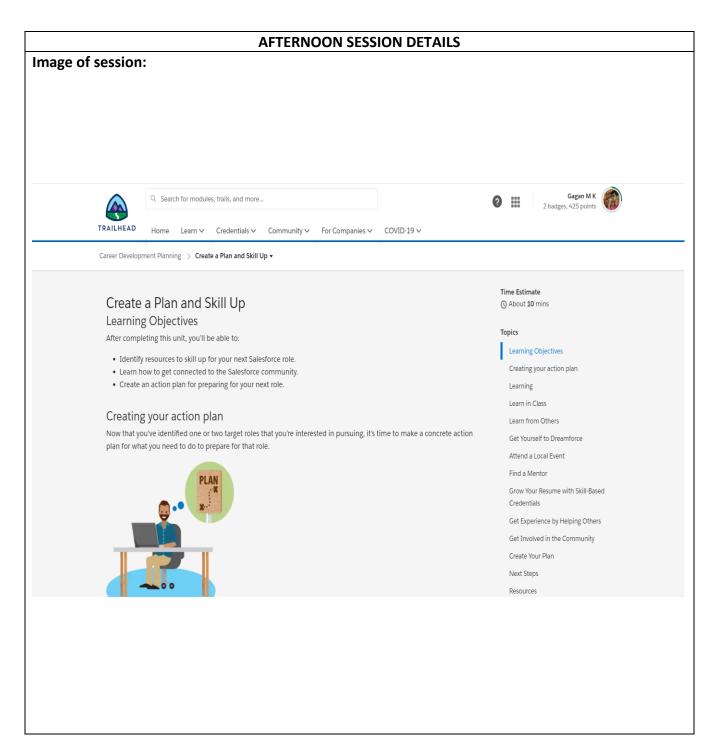
Vectors:

- The dot product may be defined algebraically or geometrically. The geometric definition is based on the notions of angle and distance (magnitude of vectors).
- The equivalence of these two definitions relies on having a Cartesian coordinate system for Euclidean space.
- In such a presentation, the notions of length and angles are defined by means of the dot product. The length of a vector is defined as the square root of the dot product of the vector by itself, and the cosine of the (nonoriented) angle of two vectors of length one is defined as their dot product.
- So the equivalence of the two definitions of the dot product is a part of the equivalence of the classical and the modern formulations of Euclidean geometry.
- The distance is covered along one axis or in the direction of force and there is no need of perpendicular axis or sin theta. In cross product the angle between must be greater than 0 and less than 180 degree it is max at 90degree. That's why we use cos theta for dot product and sin theta for cross product.
- The extent to which the two vectors go in the same direction, because if theta was 0 then cos theta would be 1, and r.s would just be the size of the two vectors multiplied together.
- If the two vectors on the other hand we're at 90 degrees to each other, if they were, r was like this and s was like this and the angle between them, theta, was equal to 90 degrees, cos theta, cos 90 is 0, and then r.s is going to be, we can immediately see, r.s is going to be some size of r, some size of s, times 0.
- If the two vectors are pointing at 90 degrees to each other, if they what's called orthogonal to each other, then the dot product it's going to give me 0.
- Take a little right-handed triangle, drop a little right-handed triangle down here where this angle's 90 degrees, then I can do the following.
- If we can say that if this angle here is theta, but cos theta is equal to, from sohcahtoa, is equal to the adjacent length here over the hypotenuse, that is, and this hypotenuse is the size of S.
- If I compare that to the definition of the dot product, I can say that R dotted with, we'll have fun with colors, dotted with S is equal to mode R size of R, times the size of S, times cos theta.
- But the size of S times cos theta if i put S up here, just need to put my theta in there, cos S, cos theta is just the adjacent side, so that's just the adjacent site here in the triangle. So, the adjacent side here is just kind of the shadow, if I if I had a light coming down from here, it's the shadow of S on R.
- Finding the modulus (size), angle between vectors (dot or inner product) and projections of one vector onto another.
- We can then examine how the entries describing a vector will depend on what vectors we use to define the axes - the basis.
- That will then let us determine whether a proposed set of basis vectors are what's called 'linearly independent.'

- This will complete our examination of vectors, allowing us to move on to matrices in module 3 and then start to solve linear algebra problems.
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- Operations we can do with vectors:
- Finding the modulus (size), angle between vectors (dot or inner product) and projections of one vector onto another.
- We can then examine how the entries describing a vector will depend on what vectors we use to define the axes - the basis.
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- This will complete our examination of vectors, allowing us to move on to matrices in module 3 and then start to solve linear algebra problems.

Date:	**14 July 2020**	Name:	**Gagan M K**
Course:	**Trailblaze**	USN:	**4AL17EC032**
Topic:	• **Explore Career Options** • **Create a Plan and Skill Up** • **Land Your Next Opportunity**	Semester & Section:	**6th sem & 'A' sec**

AFTERNOON SESSION DETAILS
Image of session:

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- **Now that you've identified one or two target roles that you're interested in pursuing, it's time to make a concrete action plan for what you need to do to prepare for that role.**
- **Developing your career plan.**
- **There are three main areas to consider in developing your career plan.**
- **Learning: what are the skills you need to acquire, and where can you learn them?**
- **Earning: what credentials do you need for this role and how can you demonstrate your skills to employers?**
- **Connecting: what are ways to connect and network with others in the field?**
- **Learning: For most skills and roles, you can find many options for learning—from self-paced online learning to instructor-led classes, events, and even formal degree programs.**
- **What type of learning you choose to do depends on your time, learning style, and budget. Sometimes what works best for you is a combination of different learning programs. There's no one right way. It's up to you to choose the adventure that works best for you.**
- **Learn Online: One of the best ways to skill up for Salesforce career paths is through Trailhead—the fun, free, hands-on way learn. If you're new to Trailhead, here are a few recommendations on where to start.**
- **Check out a few resources to get you started.**
- **Trailhead Collaboration Group on the Trailblazer Community**
- **Salesforce User Groups**
- **Salesforce Developer Meetups**
- **Featured Online Collaboration Groups**
- **For developers, there are some additional resources and ways to connect to the thriving community of more than 3 million Salesforce developers.**
- **The Salesforce developers discussion forums are an important resource to get answers to your questions. It's not uncommon for project managers, developers, and other R&D staff to contribute.**
- **On the Salesforce StackExchange, get expert guidance from an active developer community featuring some of the most prominent developers from across the globe.**
- **Using the #askforce hashtag on Twitter immediately connects you to hundreds of Salesforce administrators and developers. The answer to your 280-character questions is sometimes only a few seconds away!**
- **Blogging, helping on forums, and speaking at events are more great ways to build your reputation and expertise and take your career to the next level. See the Public Speaking Skills module for tips.**
- **For Salesforce developers or aspiring developers, hackathons and challenges are another way to build your resume. Check the Salesforce Developers home page frequently, to find new challenges, hackathons, and other opportunities to show your skills.**