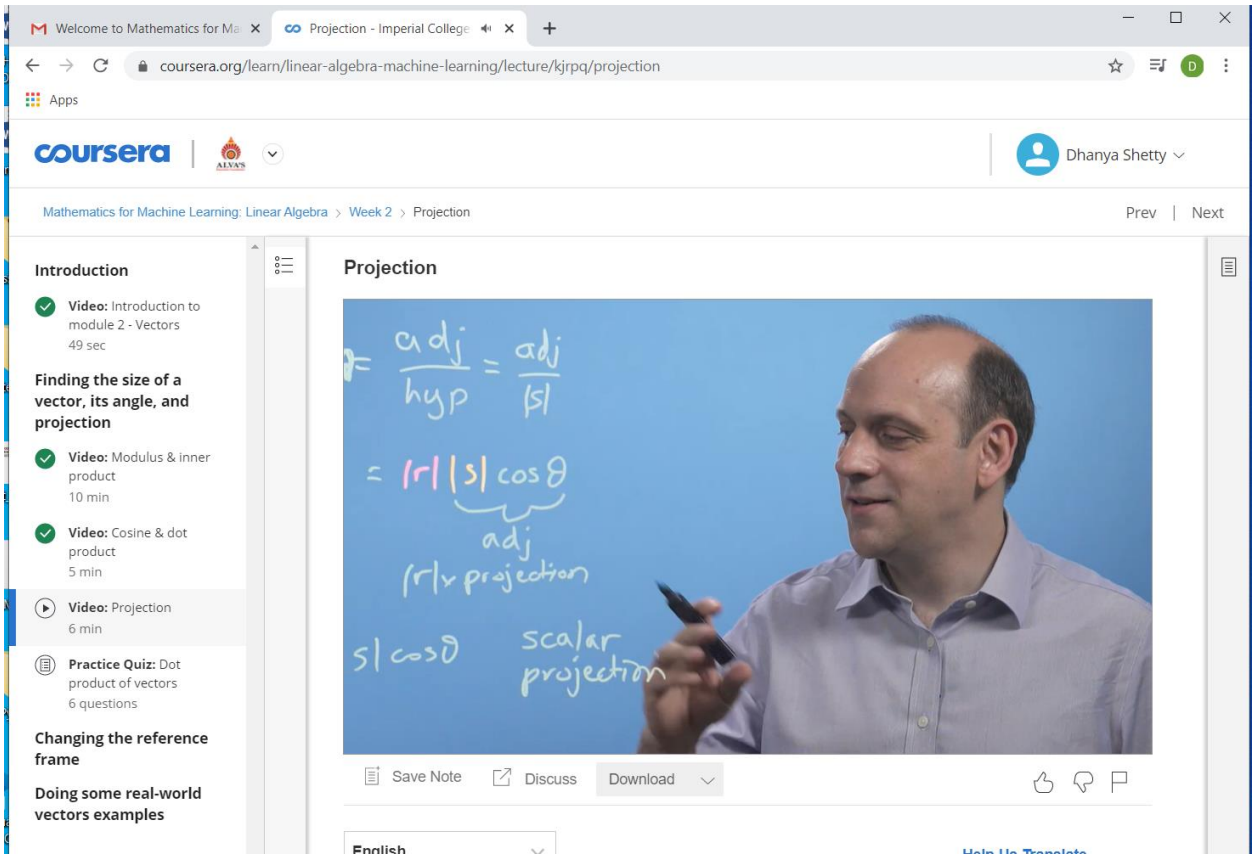
DAILY ASSESSMENT FORMAT

Date:	14-07-2020	Name:	Poorvi j gowda
Course:	Coursera	USN:	4AL17EC071
Topic:	Mathematics for Machine Learning: Linear Algebra	Semester & Section:	6th b
Github Repository:	Poorvi-2000		

FORENOON SESSION DETAILS(9.00am to 1.00pm)



Welcome to Mathematics for Ma | Cosine & dot product - Impe

coursera.org/learn/linear-algebra-machine-learning/lecture/mMKOw/cosine-dot-product

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Mathematics for Machine Learning: Linear Algebra > Week 2 > Cosine & dot product

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Introduction

- **Video:** Introduction to module 2 - Vectors 49 sec

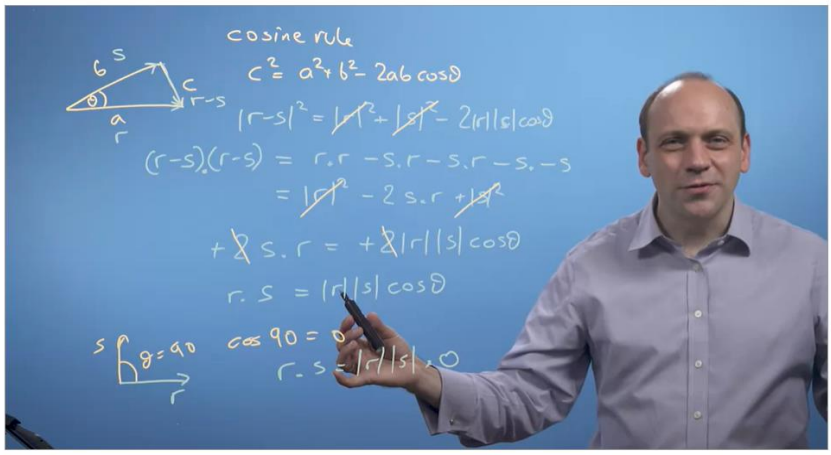
Finding the size of a vector, its angle, and projection

- **Video:** Modulus & inner product 10 min
- **Video:** Cosine & dot product 5 min
- **Video:** Projection 6 min
- **Practice Quiz:** Dot product of vectors 6 questions

Changing the reference frame

Doing some real-world vectors examples

Cosine & dot product



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English

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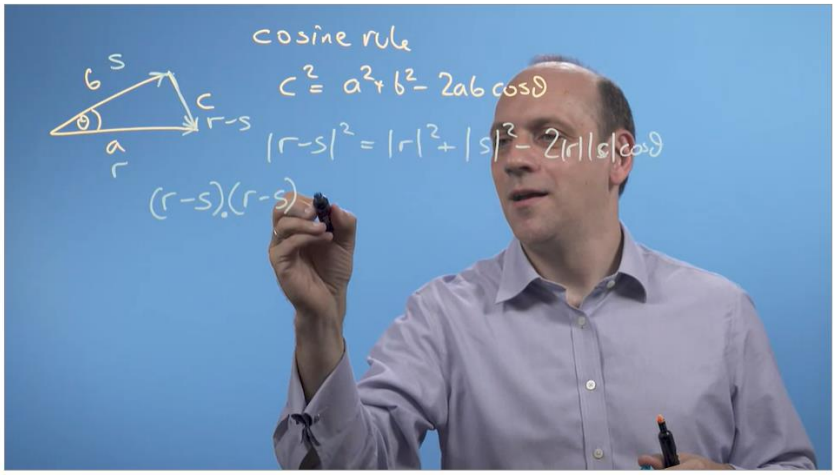

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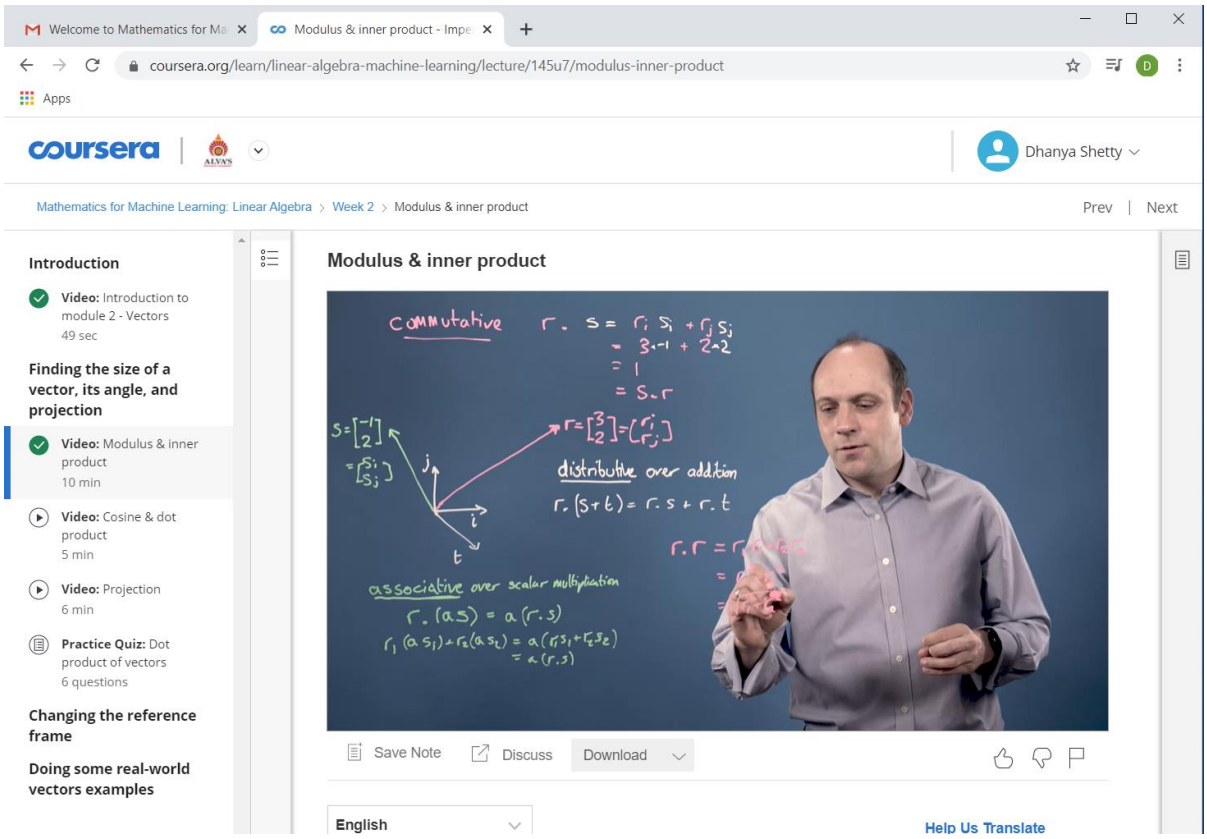


The dot product may be defined algebraically or geometrically. The geometric definition is based on the notions of angle and distance (magnitude of vectors). The equivalence of these two definitions relies on having a Cartesian coordinate system for Euclidean space.

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 (non oriented) 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.

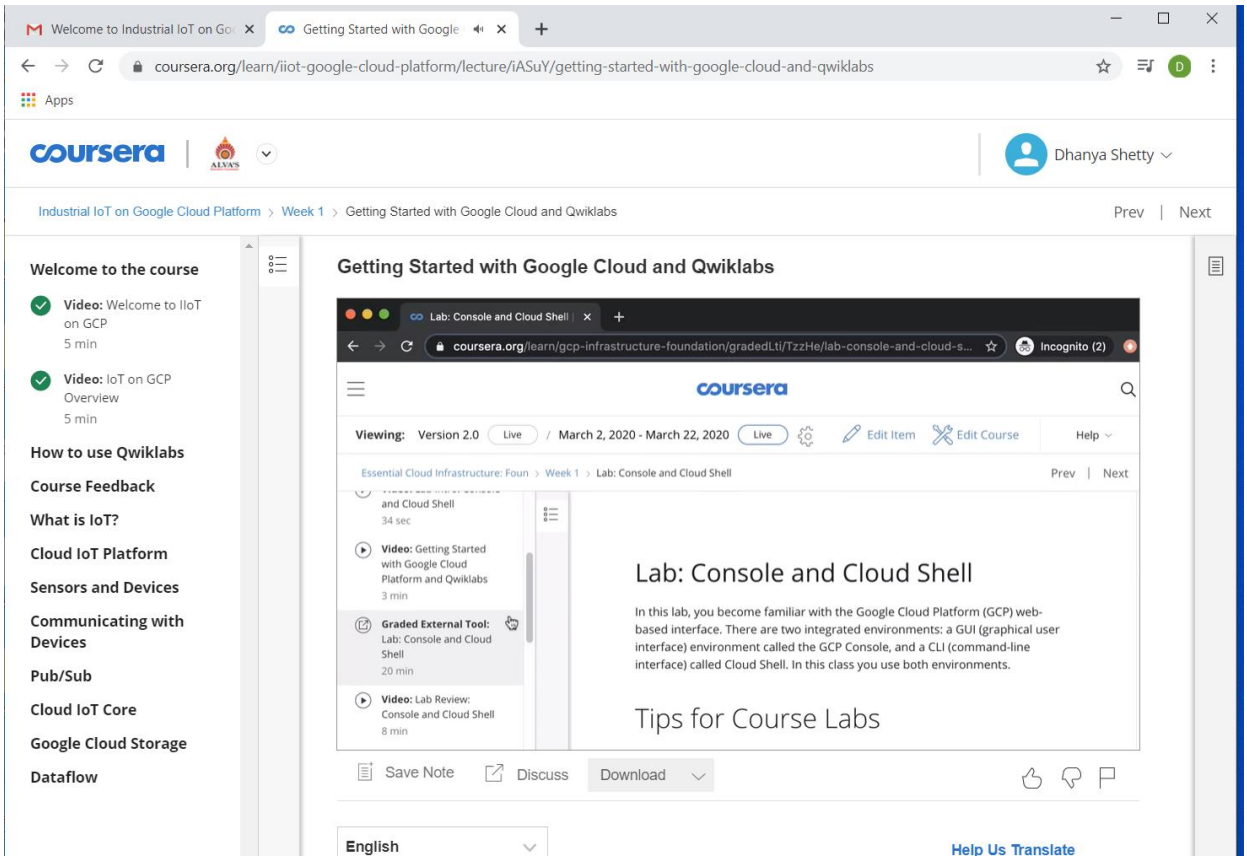
The distance is covered along one axis or in the direction of force and there is no need of perpendicular axis or sin theta. In cross **product** the angle between must be greater than 0 and less than 180 degree it is max at 90 degree. ... That's why we use **cos** theta for **dot product** and sin theta for cross **product**.

An important use of the **dot product** is to test whether or not two vectors are orthogonal. Two vectors are orthogonal if the angle between them is 90 degrees. ... Thus, two non-zero vectors have **dot product** zero if and only if they are orthogonal.

Dot products are very geometrical objects. They actually encode relative information about vectors, specifically they tell us "how much" one vector is in the direction of another. Particularly, the **dot product** can tell us if two vectors are (anti)parallel or if they are perpendicular.

The **dot product** as **projection**. The **dot product** of the vectors a (in blue) and b (in green), when divided by the magnitude of b, is the **projection** of a onto b.

Date:	**14-07-2020**	**Name:**	**Poorvi j gowda**
Course:	**Coursera**	**USN:**	**4AL17EC071**
Topic:	**Industrial IoT on Google Cloud Platform**	**Semester & Section:**	**6th b**
Github Repository:	**Poorvi-2000**		



Welcome to Industrial IoT on Go | Internet of Things Use Cases | Co

coursera.org/learn/iiot-google-cloud-platform/exam/gcC42/internet-of-things-use-cases/attempt?redirectToCover=true

Apps

Internet of Things Use Cases
Graded Quiz • 10 min

Due Jul 20, 12:29 PM IST

Congratulations! You passed!
TO PASS 75% or higher

Keep Learning
Retake the assignment in **7h 57m**

GRADE
100%

Internet of Things Use Cases

LATEST SUBMISSION GRADE
100%

1. Take a moment to ponder some of the uses of IoT: predictive maintenance, industry safety solutions, building and home automation, remote patient monitoring, asset tracking, and fraud detection.

1 / 1 point

All of these uses have a common theme that is the reason IoT is garnering so much attention. What is it?

- ○ All the use cases use machine learning or artificial intelligence, which is an incredibly fast growing field.
- ○ All the use cases employ sensors in new and unique ways
- ◉ All the use cases are gaining insights about an environment that cannot be obtained any other way.

Correct
Yes, each of these use cases is getting valuable insights about their particular real world situations. And it is due to the data collected from IoT sensors and devices.

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coursera.org/learn/iiot-google-cloud-platform/supplement/gCnBD/cloud-iot-platform-stages

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Industrial IoT on Google Cloud Platform › Week 1 › Cloud IoT Platform Stages

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5 min

Reading: Lesson Review
1 min

Quiz: IoT Networks
4 questions

Cloud IoT Platform

Reading: Lesson Introduction
3 min

Discussion Prompt: Industry Transformations
5 min

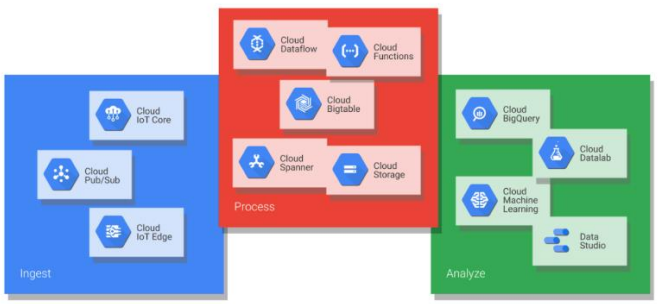
Reading: IoT Architecture
3 min

Reading: Google Cloud IoT Architecture
6 min

Reading: Cloud IoT Platform Stages
2 min

Reading: Ingest Data
2 min

Cloud IoT Platform Stages



Google Cloud IoT platform includes the three stages necessary for an IoT pipeline: data ingestion, data

The course discusses sensors and devices but the focus is on the **cloud** side. You'll learn about the importance of scaling, device communication, and processing streaming data.

IoT cloud refers to any number of **cloud** services that power the **IoT**. These include the underlying infrastructure needed for processing and storing **IoT** data, whether in real time or not. ... Discover the power of Arm's transformative device-to-data **platform**.

Ingest data from connected devices and build rich applications that integrate with the other big data services of **Google Cloud** Platform.

Father of IoT, **Kevin Ashton**, says, 'if you think IoT is a buzzword, your business will fail'.

Which cloud is best for IoT?

Arduino IoT Cloud is an application that helps makers build connected objects in a quick, easy and secure way. You can connect multiple devices to each other and allow them to exchange real-time data.
IoT is essentially a platform where embedded devices are connected to the internet, so they can collect and exchange data with each other. It enables devices to interact, collaborate and, learn from each other's experiences just like humans do.M

What are examples of IoT?

Top Internet-of-Things (IoT)

- Connected appliances.
- Smart home security systems.
- Autonomous farming equipment.
- Wearable health monitors.
- Smart factory equipment.
- Wireless inventory trackers.
- Ultra-high speed wireless internet.
- Biometric cybersecurity scanners
