



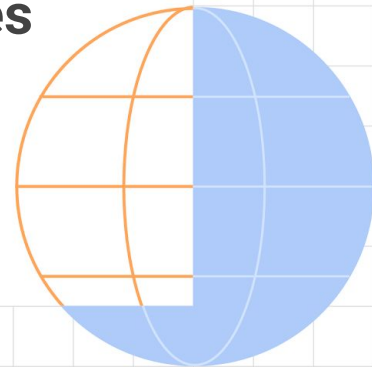
Developer Student Clubs

Data science Track



Intro to Data Science
& Data Science Methodologies

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@ DSC Assiut



Agenda

- • Intro to Data Science and its mythologies
- • Python in a nutshell
- • Intro to big data and Google's bigquery
- • Data collection
- • Data cleaning
- • Data visualization
- • Data modeling
- • Modelling evaluation



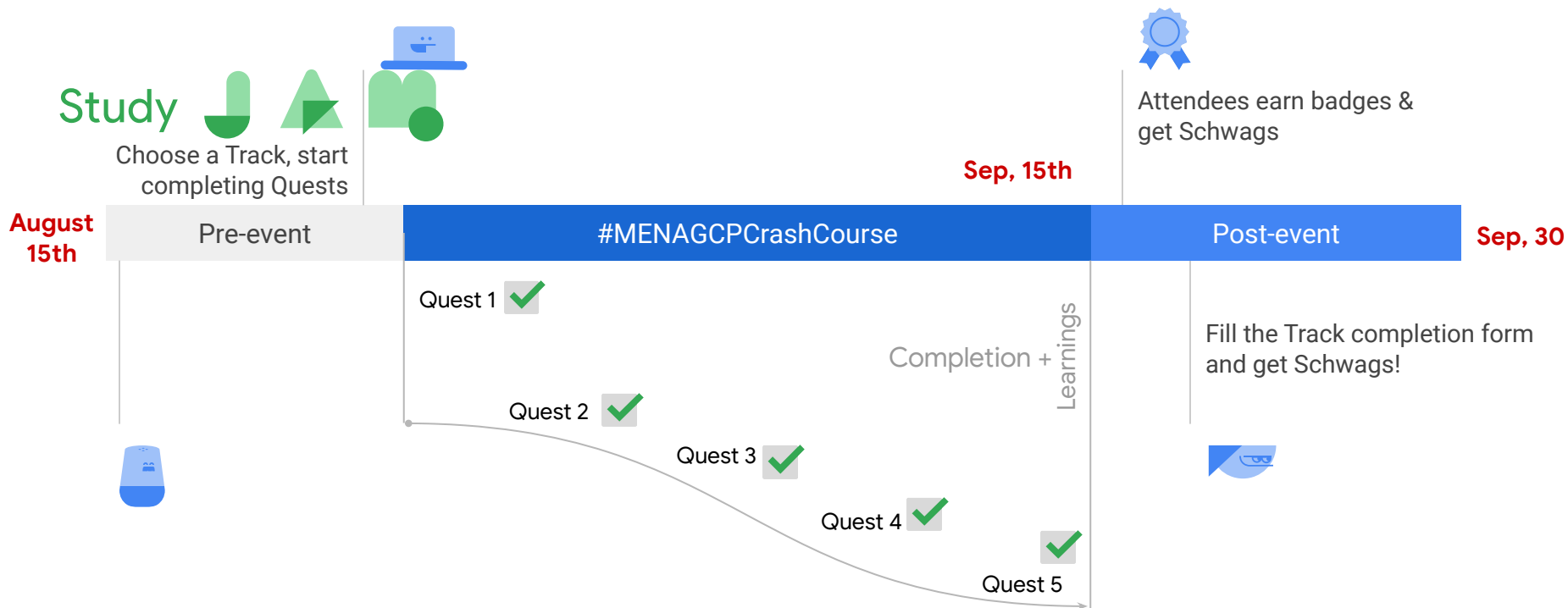
Data Science

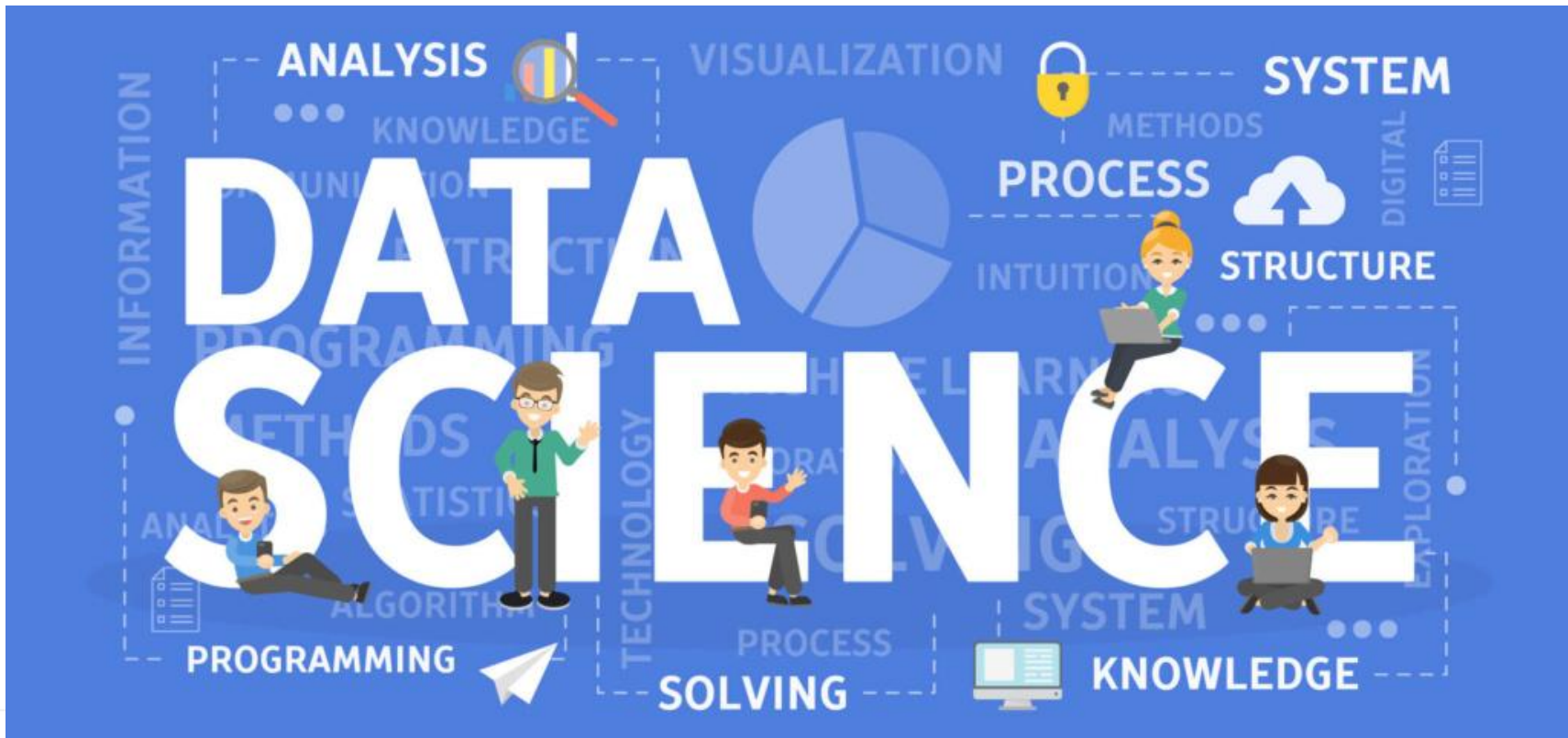
Quests part of the track

1. Baseline: Data, ML, AI
2. BigQuery For Data Analysis
3. Scientific Data Processing
4. Data Engineering
5. Data Science on the Google Cloud Platform



Track-1: Sep Timeline - for participants





Data Science

- • Statistics
- • Machine Learning
- • Operations Research
- • Optimization



What is Big Data?



Big Data

- Can be in **zettabytes**
- It **includes**:
 - Images
 - Videos
 - Data from sensors or social media
- Its **generation rate is fast**



Data Science Example

- **Make** optimization for a certain cost or process
- **Know** if clients need a service or product
- **Evaluating** and **Targeting** clients
- **Predict** your sales

Data Scientist Roles and Responsibilities

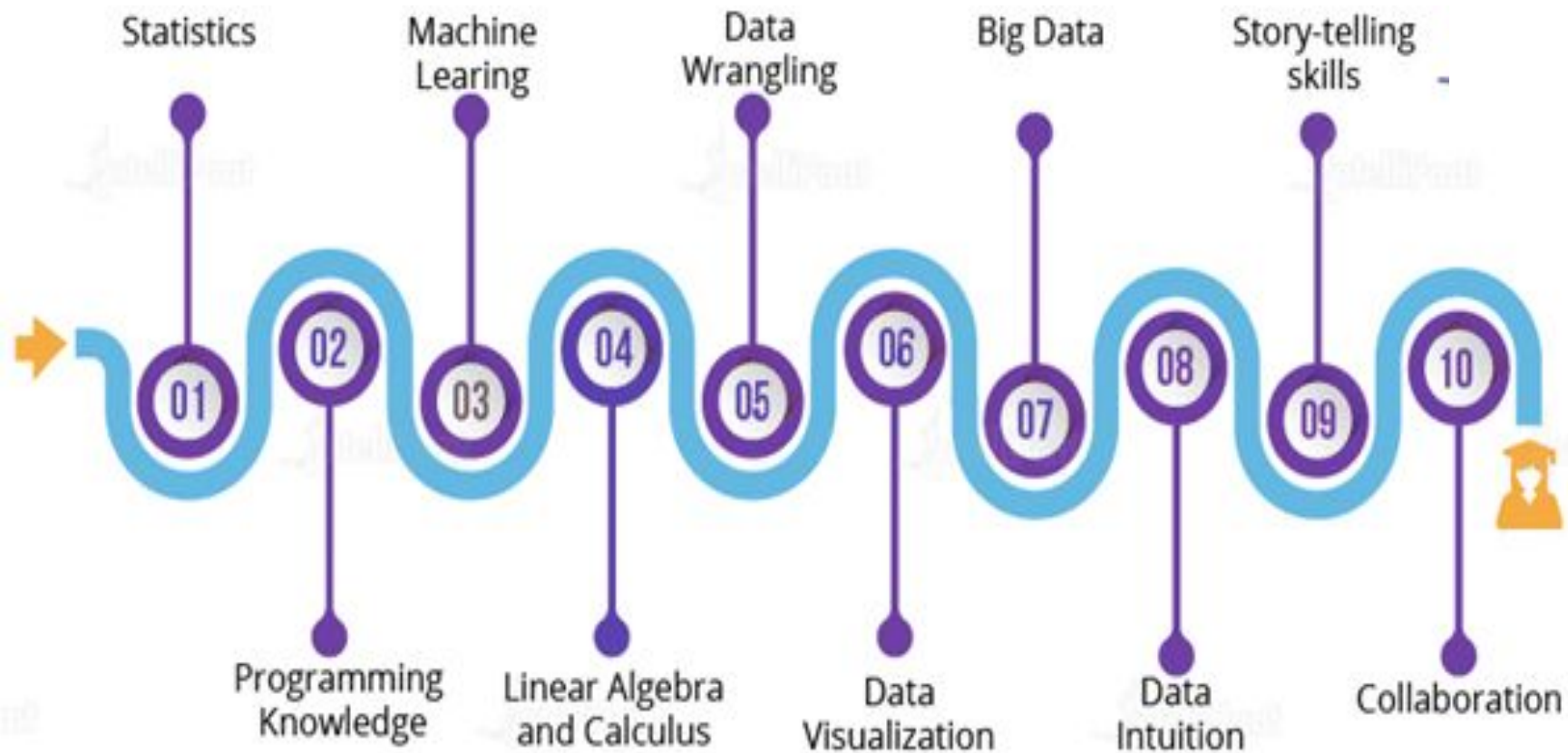


Data Scientist Responsibilities

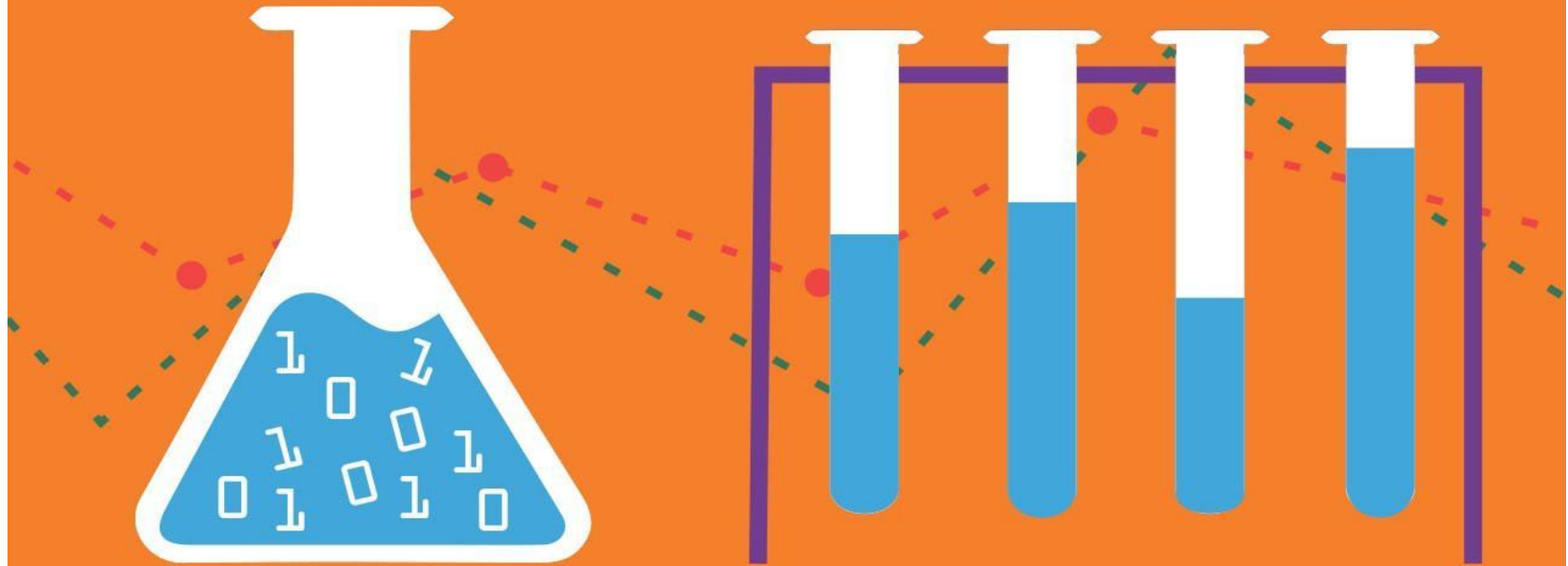
- Framing the problem
- Choosing the general framework for solving the problem and the suggested models for this
- Data exploration and cleansing
- Building the models whether it is: Statistical or Machine learning
- Delivering the findings with the business team in an easy way

Data Scientist Technical Skills

- Strong Statistics and Mathematics Knowledge
- Machine Learning
- Query Language Like: SQL
- Scripting Language Like: Python or R



DATA SCIENCE METHODOLOGY



Heavy end-user involvement
Knowledge intensive

Heavy end-user
involvement

Business
Understanding

Data
Understanding

Data
Preparation

Feature
Selection

Model
Training

Model
Validation

Model
Deployment

Update &
Tuning



Data Collection

Data Science

Phase 1

Phase 2

Phase 3

Data Science Applications



Internet Search

The screenshot shows a Google search interface with the query 'cats' entered in the search bar. The search bar is highlighted with a red rectangle. Below the search bar, a dropdown menu displays search suggestions: 'cats musical', 'cats and dogs', 'cats for sale', 'cats musical songs', 'cats breeds', 'cats funny', 'cats game', 'cats protection', 'cats meowing', and 'cats for adoption'. Below the suggestions, there are three video thumbnails. The first video is titled 'Cats are so funny you will die laughing - Funny cat compilation' by Tiger Productions, uploaded on Dec 24, 2016. The second video is titled 'Why Humans Are Obsessed with Cats | Annals of Obsession | The ...' by The New Yorker, uploaded on Mar 27, 2018. The third video is titled 'How I Trained My Cats' by JunsKitchen, uploaded on Nov 14, 2017. Below the videos, there are three text links: 'Complete Guide to Caring for Cats | Cat Breed Information, Cat ...' from vetstreet.com/cats/, 'Cats for Adoption | Peterborough Humane Society' with a link to https://peterboroughhumaneociety.ca/adopt-a-pet/cats/, and a snippet about dropping in and lending love and attention to cats and kittens at the shelter. To the right of the search results, there is a grid of six cat images. Below the images, there is a knowledge panel for 'Cat' (Animal). The panel includes a description: 'The cat, often referred to as the domestic cat to distinguish from other felids and felines, is a small, typically furry, carnivorous mammal. It is often called house cat when kept as indoor pet or feral/feral domestic cat when wild. It is often valued by humans for companionship and for its ability to hunt vermin. Wikipedia'. It also lists: 'Lifespan: 2 – 16 years (In the wild)', 'Scientific name: Felis catus', 'Gestation period: 58 – 67 days', 'Mass: 3.6 – 4.5 kg (Adult)', and 'Daily sleep: 12 – 16 hours'. A 'Did you know' section states: 'The vomeronasal organ in cats can readily detect even the smallest of chemical clues in their environments, which can help them determine the proximity and status of other cats. fullyfeline.com'.





Targeted Advertising

The image displays a collection of targeted advertisements, likely from a user's web browsing history or a simulated ad environment. The ads are arranged in a grid-like fashion, showcasing a variety of products and services:

- Netflix:** A banner for a "One Month Free" trial with a "SIGN UP" button.
- Stack Overflow:** A banner with the text "Get started" and the Stack Overflow logo.
- Shein:** A large advertisement featuring a woman in a floral dress, the Shein logo, and the text "CASH ON DELIVERY" and "SHOP NOW >".
- Amazon Prime Video:** An advertisement for the show "Mirzapur" featuring the text "#KaleenBhaiya King of Mirzapur" and a "STREAM NOW" button.
- ISB Education:** An advertisement for a "Certificate Programme in BUSINESS ANALYTICS" with details about the class of 2020 and an "Apply Now" button.
- ThoughtWorks Products:** An advertisement with a "SUBSCRIBE" button and a video player showing a presentation.
- 70TRADES.com:** An advertisement featuring a man's profile and the text "I earn \$1,000 a month without any knowledge or experience." with a "Learn how" button.
- Pizza Hut:** A banner for a "BUY 2 PIZZAS AT 50% OFF" promotion with an "ORDER NOW" button.
- ThoughtWorks Products (Ad):** A small advertisement with a "SUBSCRIBE" button and a video player showing a presentation.

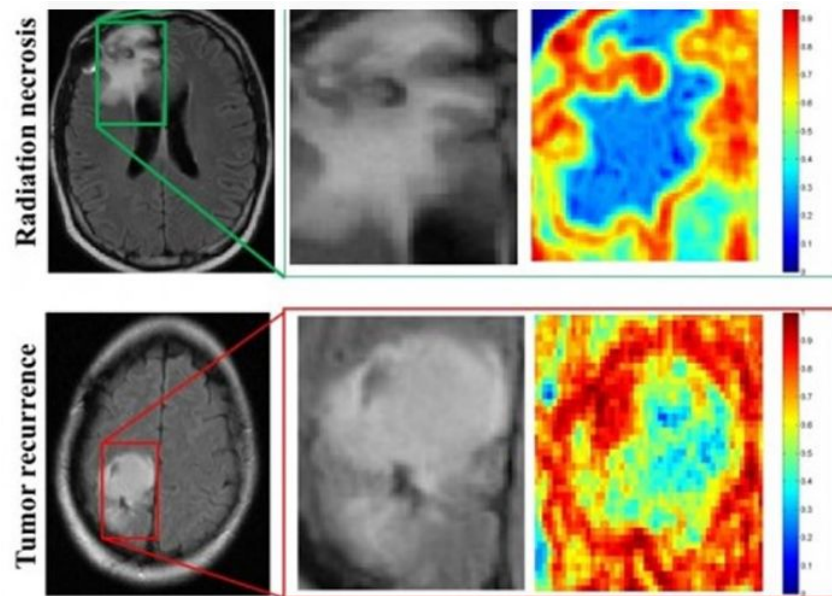
Website Recommendations

Compare with similar items

				
This item Bose SoundLink Wireless Around-Ear Headphones with Mic (Black)	Sennheiser HD 4.40-BT Bluetooth Headphones (Black)	Bose 741158-0020 SoundLink Wireless Around-Ear Headphones with Mic (White)	Bose 789564-0030 Quiet Comfort 35 Wireless Headphone (Blue)-Special Edition	
Add to Cart	Add to Cart	Add to Cart	Add to Cart	
Customer Rating	★★★★☆ (68)	★★★★☆ (22)	★★★★☆ (200)	
Price	₹ 19,000.00	₹ 7,490.00	₹ 19,000.00	₹ 29,363.00
Shipping	FREE Shipping	FREE Shipping	FREE Shipping	FREE Shipping
Sold By	Appario Retail Private Ltd	Appario Retail Private Ltd	Appario Retail Private Ltd	Appario Retail Private Ltd
Colour	Black	Black	White	Blue
Connectivity Technology	bluetooth wireless	Bluetooth Wireless	Bluetooth Wireless	Bluetooth Wireless

Healthcare

1. Medical Image Analysis
2. Genetics & Genomics
3. Drug Development





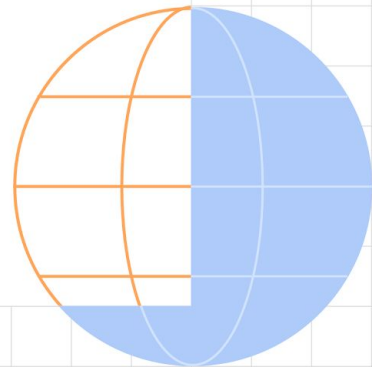
Developer Student Clubs

Data science Track

Explaining QwikLabs



Tawadros Gamal
@ DSC Assiut





Qwiklabs labs

Qwiklabs labs are hands-on labs.

A hands-on lab is an online learning environment along with a set of instructions to walk you through a live, real world, and scenario-based use case. In a lab you have access to the actual environment you want to learn about, not a simulation or demo environment. You can access the lab environment from anywhere on the Internet using a standard browser.



Qwiklabs Notes

User Journey

1. Follow the exact **campaign link**.
2. Sign in or register to the platform.
3. Enrol to the exact same quest linked to the campaign.
4. You will be given only **1-5 credits** to start 1st lab.
5. You MUST click **Start Lab** on the first lab in the same exact quest linked to the campaign.
6. Wait for 10 seconds then click on **End Lab**.
7. Now, you will be given one free month access
(may take up to 5 minutes to be redeemed)

Before you start, get ready

- Create GMail account if you don't have one.
- Type in the browser

Qwiklabs.link



To get free Qwiklabs month

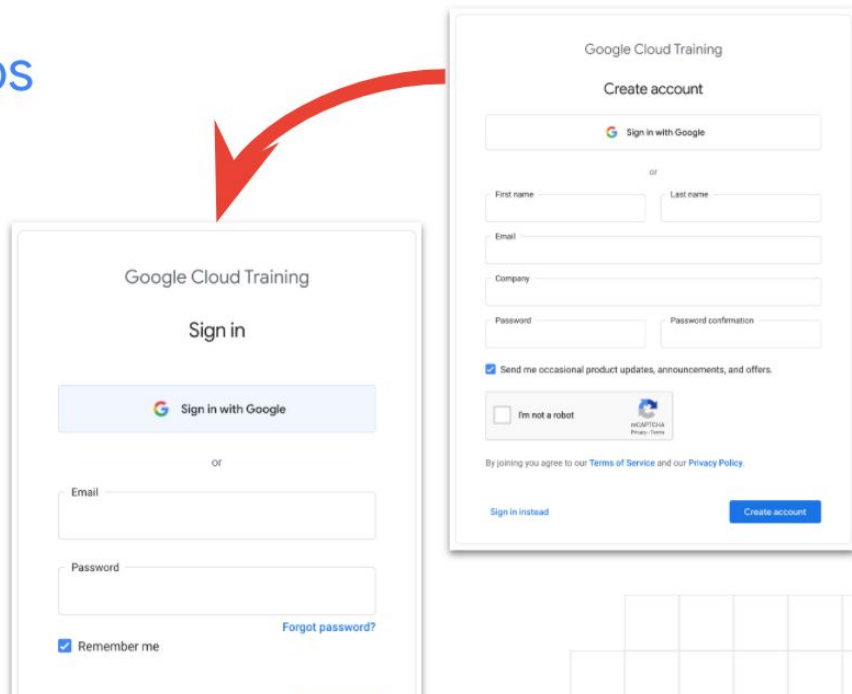

Follow these easy simple steps

If you don't have Qwiklabs account:

- Click “**Join**”, fill the form and click **Create Account**
- You will receive email from noreply@qwiklab.com
- Click the confirmation link to confirm your account
- Now signin by entering your username and password


OR If you already have Qwiklabs account:

- Click “**Signin**”, enter **username** and **password**, and submit



Google Cloud Training

Sign in

 Sign in with Google

or


Email

Password

☒ Remember me [Forgot password?](#)

Google Cloud Training

Create account

 Sign in with Google

or


First name Last name

Email

Company

Password Password confirmation

☒ Send me occasional product updates, announcements, and offers.

☐ I'm not a robot 

By joining you agree to our [Terms of Service](#) and our [Privacy Policy](#).

[Sign in instead](#) [Create account](#)

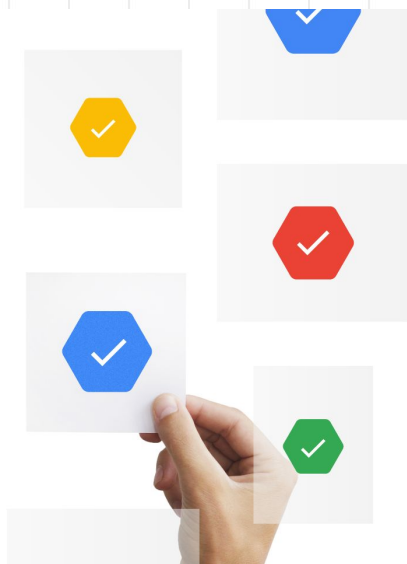
Get free Qwiklabs month

These links expires at midnight, so register today!!



Become a **Google Cloud expert** with hands-on training

Powered by Qwiklabs



bit.ly/dsc-2020-09

Valid one month



Google Developers

Enroll Now

Enroll in this quest to track your progress toward earning a badge.

Enroll in this Quest



Start Lab

01:00:00

Student Resources

- [What is Machine Learning?](#)
- [Harness the Power of Machine Learning with AI Platform](#)
- [AI Platform: Qwik Start - Qwiklabs Preview](#)



This lab costs 1 Credit.

Enter Lab Access Code:

You have a valid subscription package. Would you like to charge this lab to your subscription?

1234

1234

1234

1234

Use Subscription

Launch with Access Code



End Lab

00:59:12

Open Google Console

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Username

student-01-374cb8d0ee85@qwiklabs.net



Password

YR4qS5dGk6



GCP Project ID

qwiklabs-gcp-01-215199c3915c



Developer Student Clubs

Google Developers

Wait 5 minutes!



Alex

Alex@example.com

My Account

Monthly Subscription

Sign Out

The screenshot shows the Google Cloud Training dashboard. At the top, there is a header with the Google Cloud Training logo, a search bar, and a help icon. On the left sidebar, there are navigation links: Home, Catalog, and My Learning. The main content area is divided into sections: 'In Progress' and 'Completed Labs'. A modal dialog is centered on the screen, titled 'Share your badges with a public profile', with the text 'The link to your public profile is hidden — it is up to you to share it with your network and colleagues.' and two buttons: 'Not Now' and 'Make Profile Public'. Three red arrows with text labels point to specific elements: 'Click on My Learning' points to the 'My Learning' link in the sidebar; 'Click on View' points to the 'View Public Profile' link in the top right; and 'Click on "Make Profile Public"' points to the 'Make Profile Public' button in the modal dialog.

Google Cloud Training

Search

Home

Catalog

My Learning

In Progress

QUEST

G Suite Essentials

Introductory

Completed Labs

Google Sites: Getting Started

Completed 3 months ago

Share your badges with a public profile

The link to your public profile is hidden — it is up to you to share it with your network and colleagues.

Not Now

Make Profile Public

View Public Profile

Click on My Learning

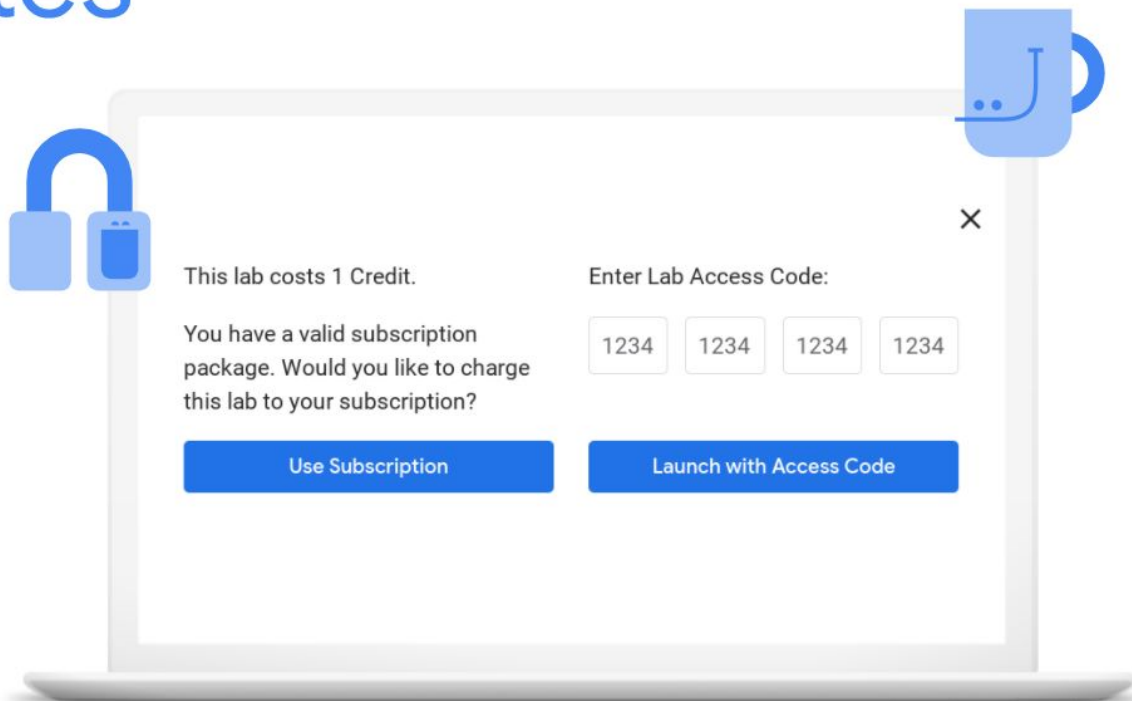
Click on View

Click on "Make Profile Public"

Qwiklabs Notes

Having trouble?

1. Sign out of your Qwiklabs account and sign back in.
2. Note that you will still see prices on labs - but you will be able to use your subscription to take them. When you are prompted for payment, simply click "Use Subscription" to take the lab with your free 1-month pass.
3. Still having trouble? Reach out to Support@Qwiklabs.com and we'll be happy to assist!



Any Questions



Remember That
#U_are_Our_mission



Thank You!

