Google Developers

Developer Student Clubs

Data science Track

Intro to Data Science & Data Science Methodologies

Margo Sabry

@ 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

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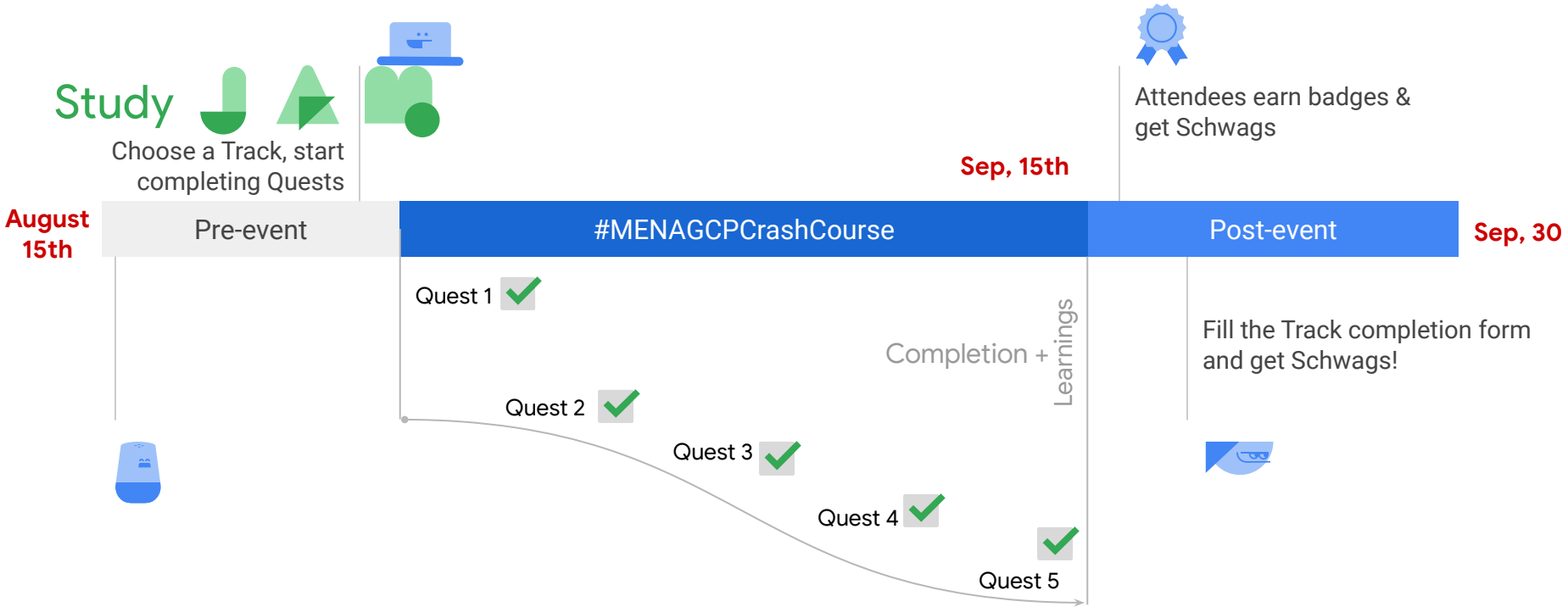

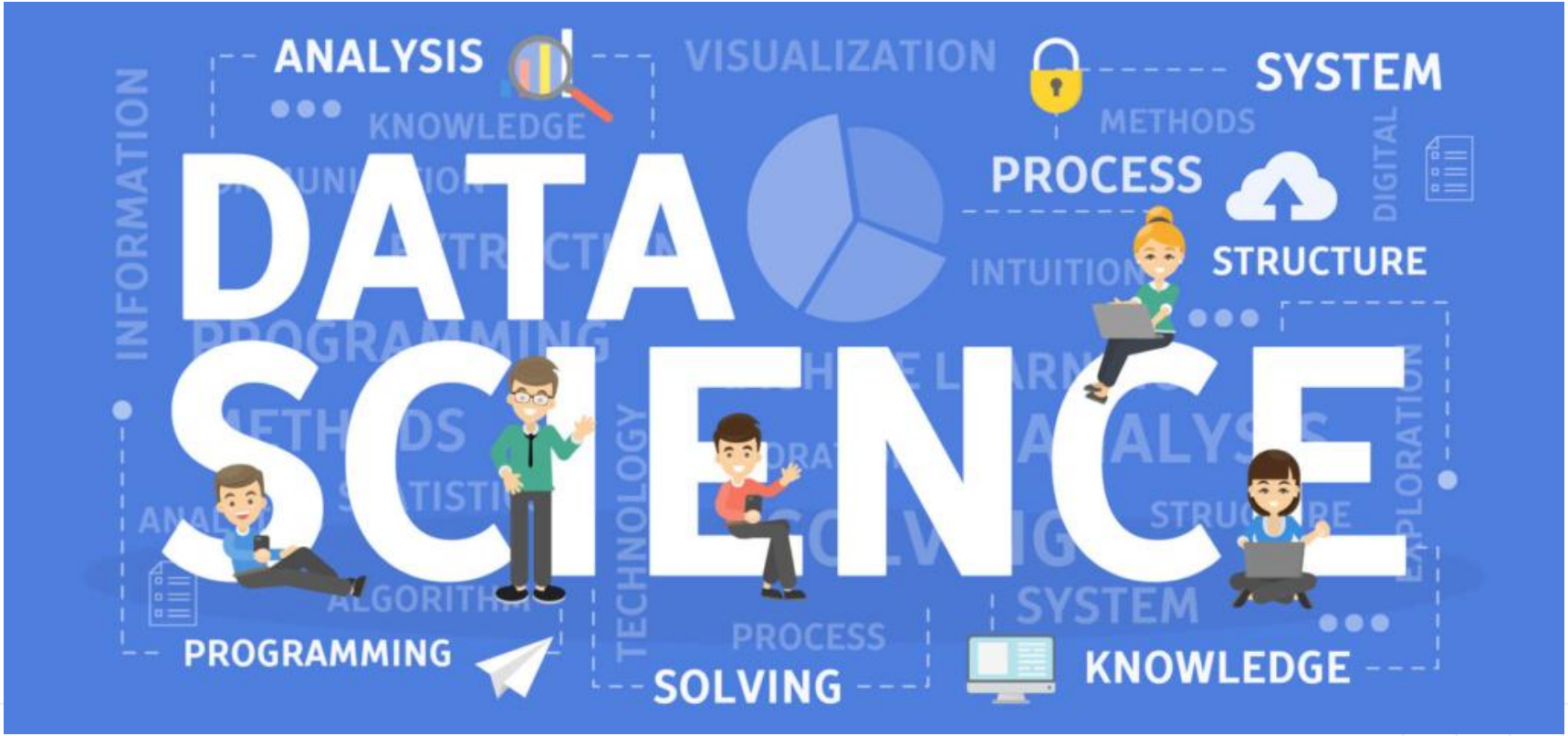
ANALYSIS
VISUALIZATION
SYSTEM
KNOWLEDGE
METHODS
PROCESS
INFORMATION
DIGITAL
STRUCTURE
INTUITION
DATA
SCIENCE
PROGRAMMING
TECHNOLOGY
EXPLORATION
ALGORITHM
PROCESS
PROGRAMMING
SOLVING
KNOWLEDGE

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

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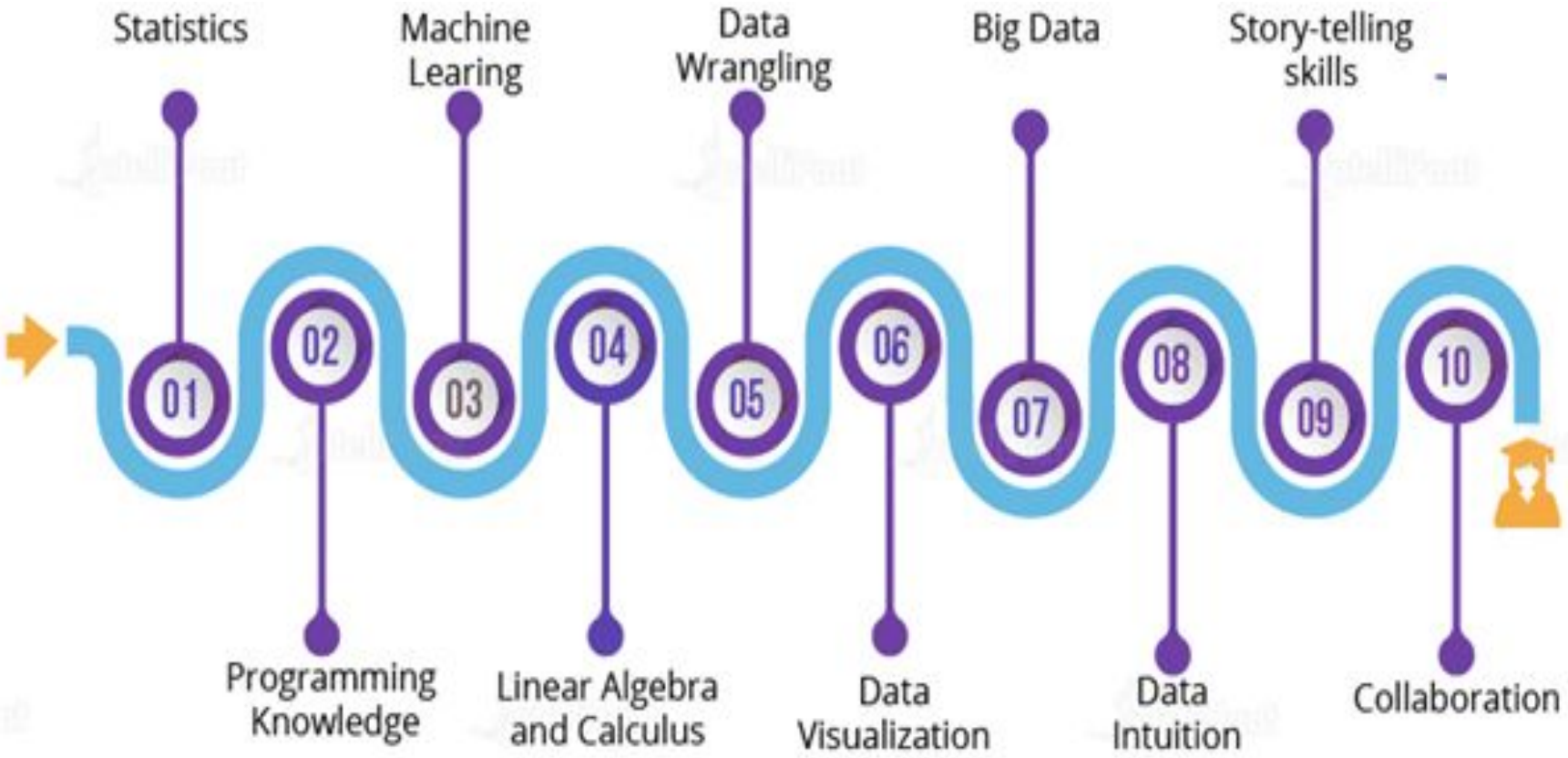
Data Scientist Responsibilities

- 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



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DATA SCIENCE METHODOLOGY

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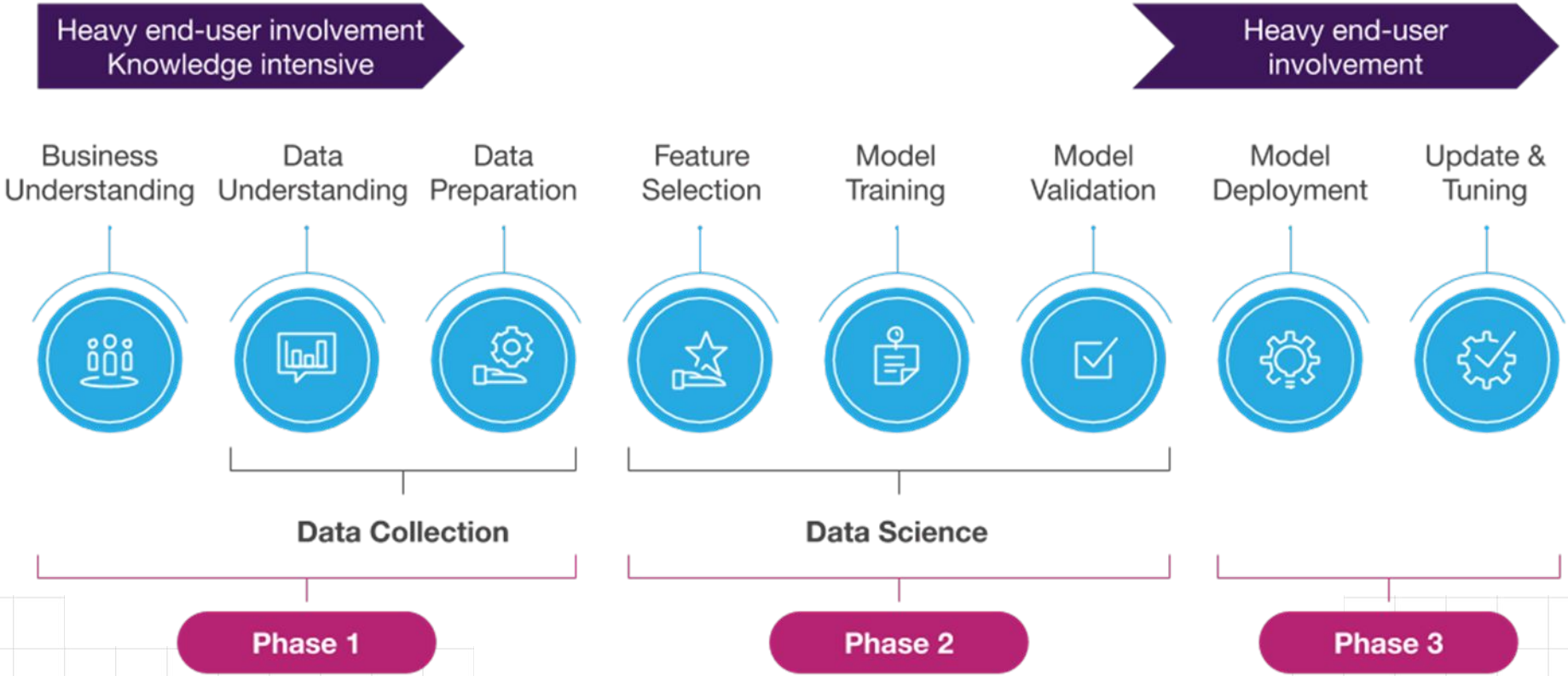
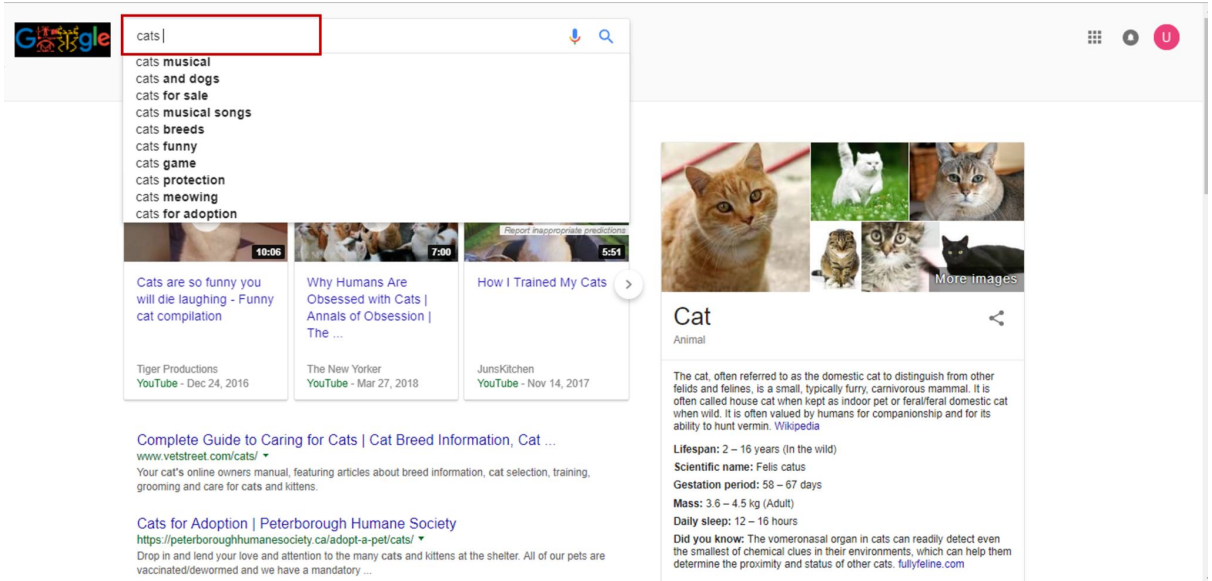
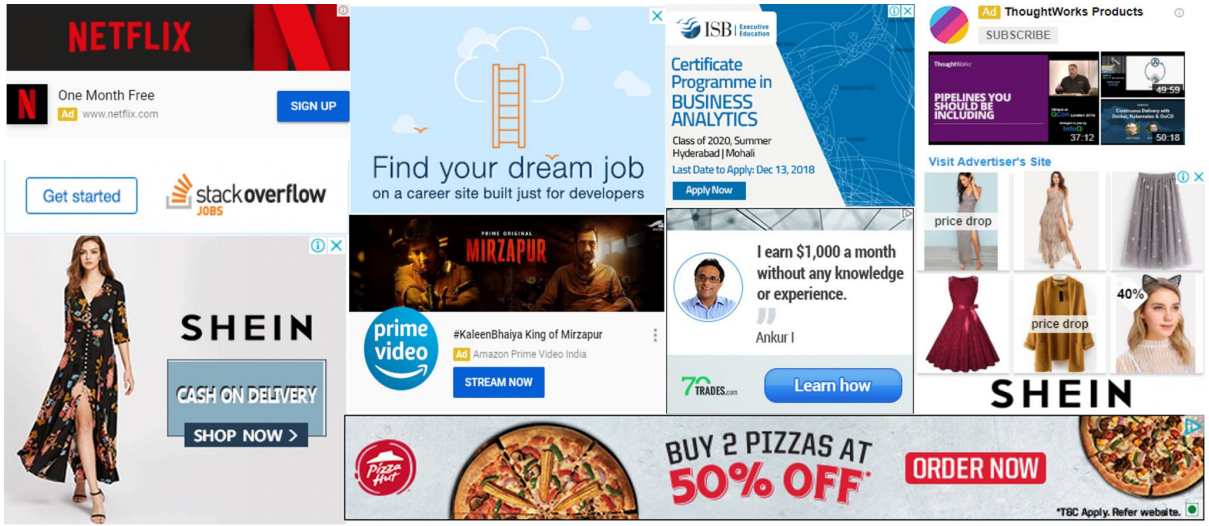

Heavy end-user involvement
Knowledge intensive
Heavy end-user involvement
Business Understanding
Data Understanding
Data Preparation
Feature Selection
Model Training
Model Validation
Model Deployment
Update & Tuning
Data Collection
Data Science
Phase 1
Phase 2
Phase 3

Data Science Applications

Internet Search



Targeted Advertising



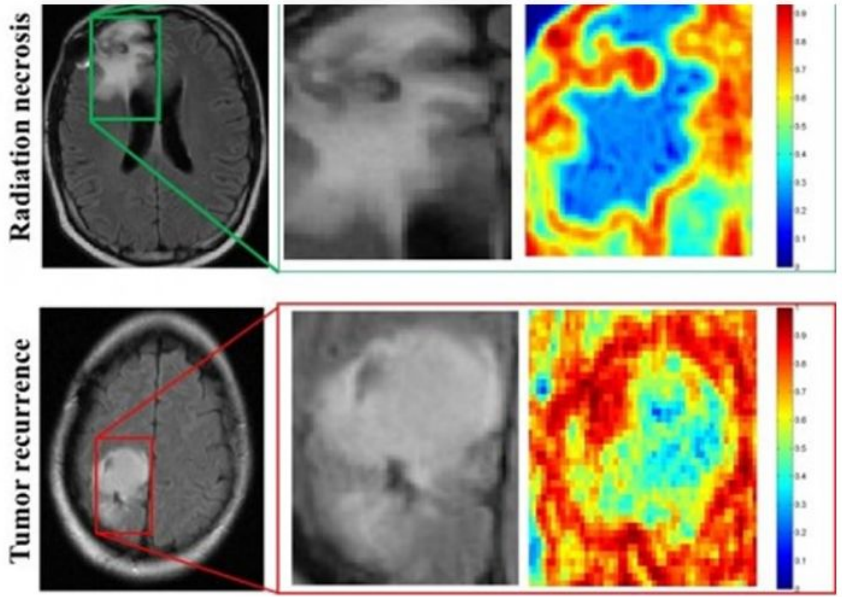
Website Recommendations

Compare with similar items

	This item Bose SoundLink Wireless Around-Ear Headphones with Mic (Black) Add to Cart	Sennheiser HD 4.40-BT Bluetooth Headphones (Black) Add to Cart	Bose 741158-0020 SoundLink Wireless Around-Ear Headphones with Mic (White) Add to Cart	Bose 789564-0030 Quiet Comfort 35 Wireless Headphone (Blue)-Special Edition Add to Cart
Customer Rating	★★★★☆ (68)	★★★★☆ (349)	★★★★½ (22)	★★★★½ (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



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Data science Track

Explainging 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

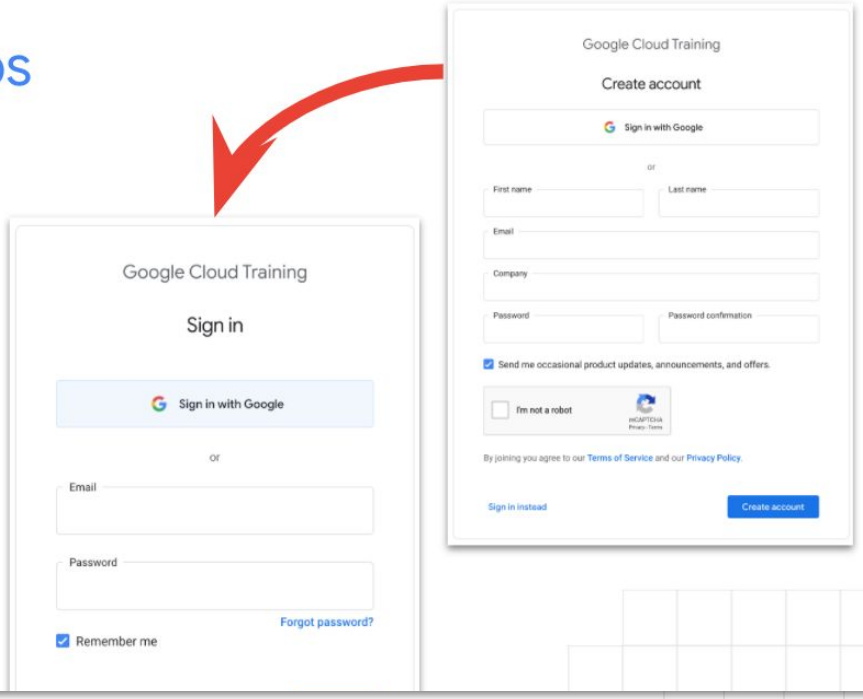
Follow these easy simple steps

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



Get free **Qwiklabs** month

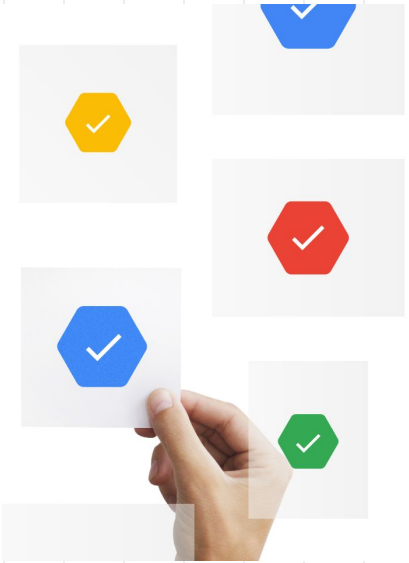
These links expires at midnight, so register today!!

QWIKLABS

Become a Google Cloud expert with hands-on training

Powered by Qwiklabs

Google Cloud Platform



bit.ly/dsc-2020-09

Valid one month

Enroll Now

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

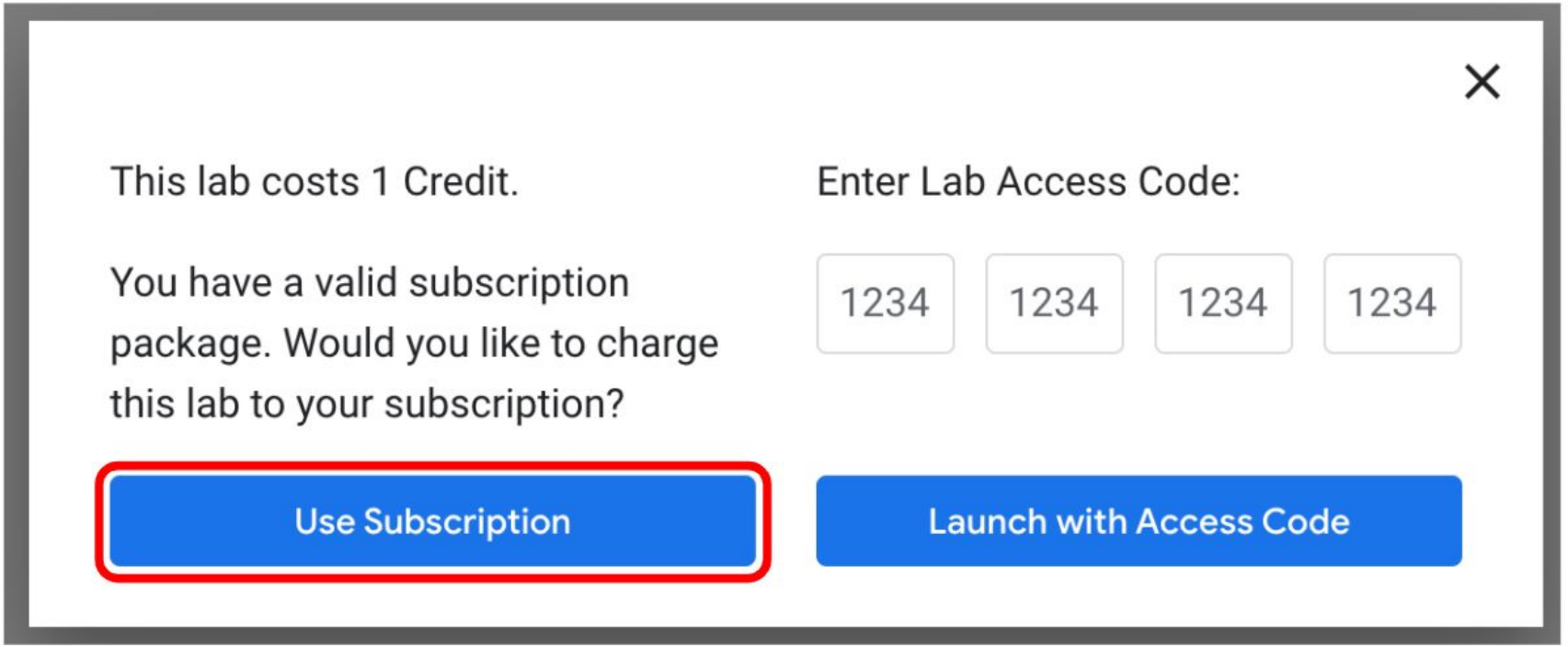
Enroll in this Quest

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.
You have a valid subscription package. Would you like to charge this lab to your subscription?
Use Subscription
Enter Lab Access Code:
1234
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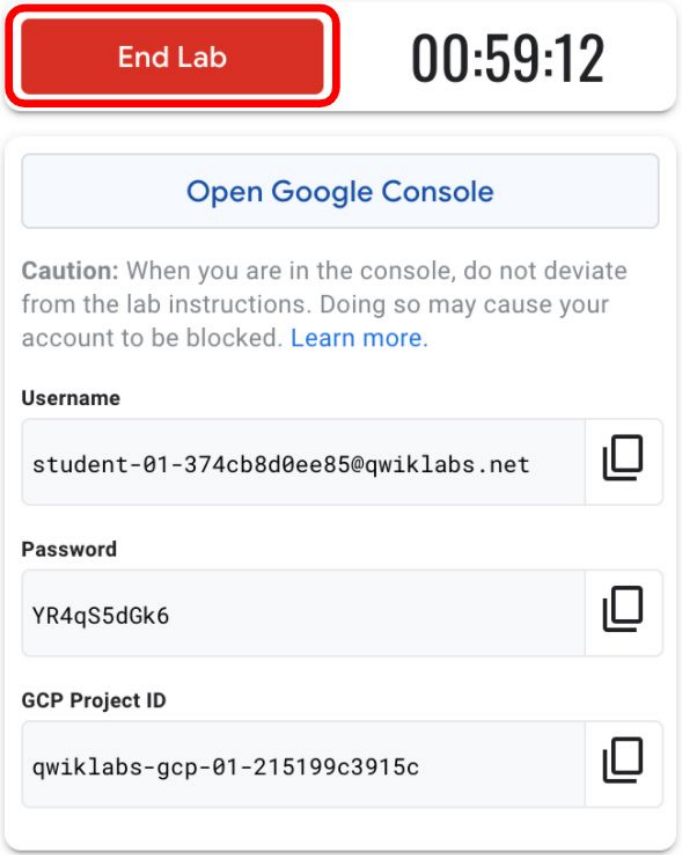
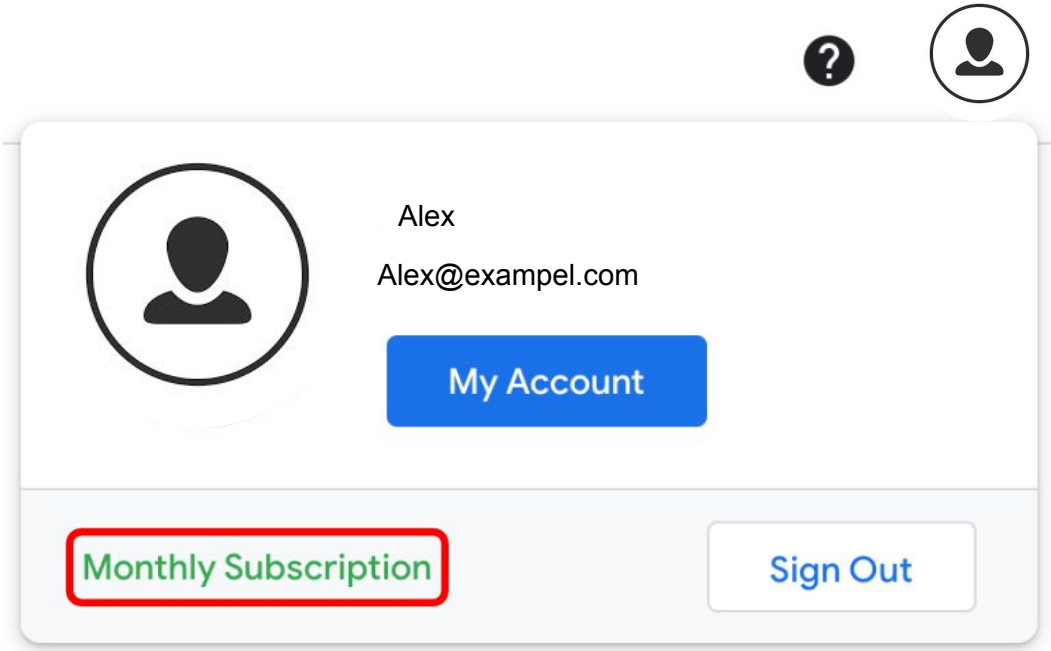
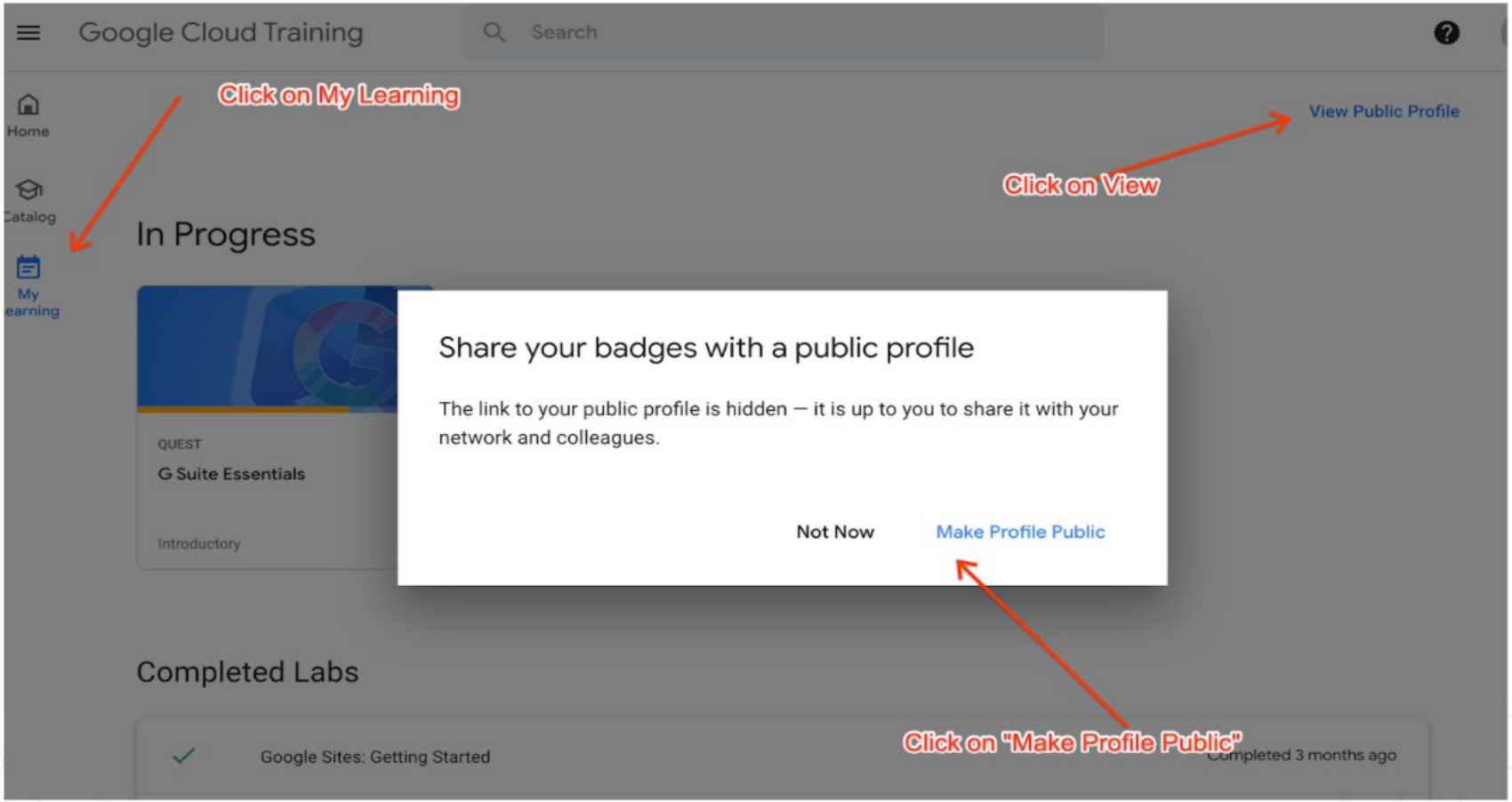
Launch with Access Code


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

Wait 5 minutes!

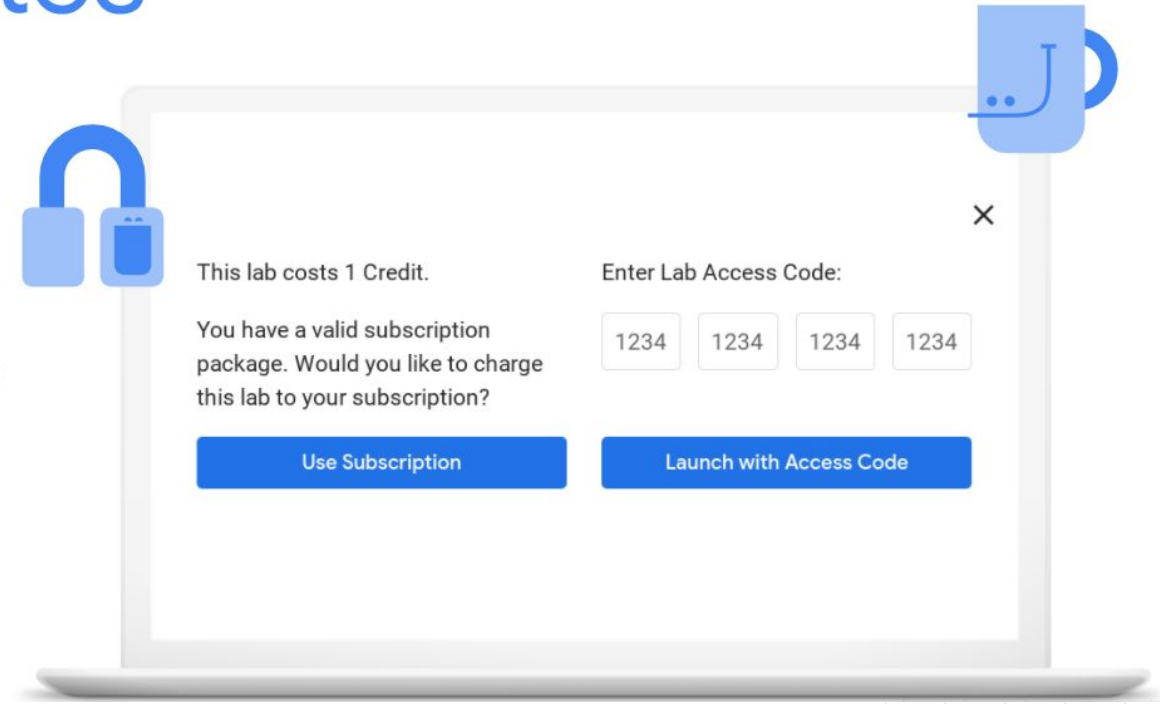



Google Cloud Training
Search
Click on My Learning
View Public Profile
Click on View
Home
Catalog
My Learning
In Progress
QUEST
G Suite Essentials
Introductory
Share your badges with a public profile
The link to your public profile is hidden — it is up to you to share it with your network and colleagues.
Not Now
Make Profile Public
Completed Labs
Google Sites: Getting Started
Completed 3 months ago
Click on "Make Profile Public"

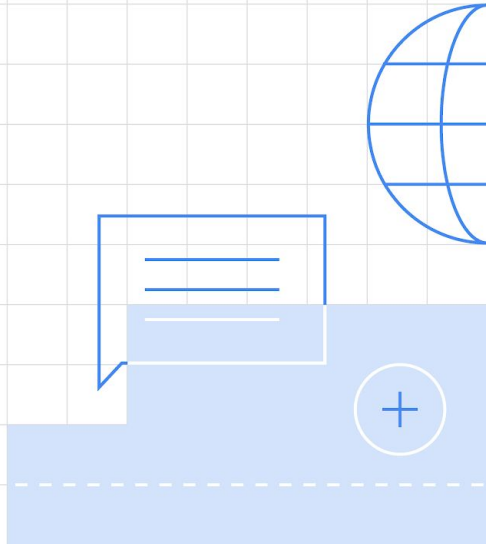
Qwiklabs Notes

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!