

SPECIALIZATION COURSE

Machine Learning Operations (MLOps)

 +91 8940876397

 sarath@psitrontech.com

 7:00 PM to 11 PM IST
8:30 AM to 12:30 PM EST
2:30 PM to 6:30 PM CET

Starting from **April 15th**

- **7 weekend's**
 - One-on-one debugging
-  Participants' convenience.

Every Saturday & Sunday

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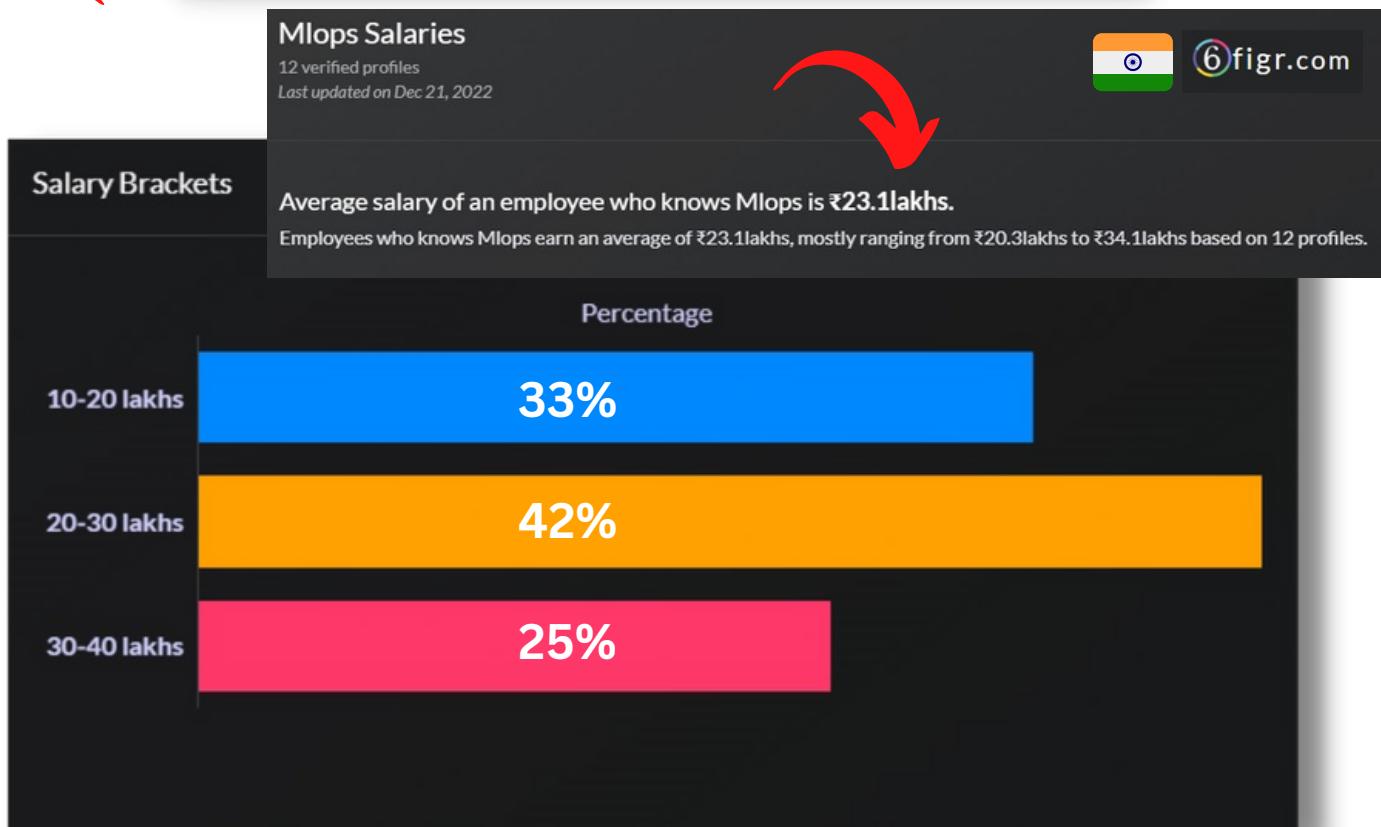
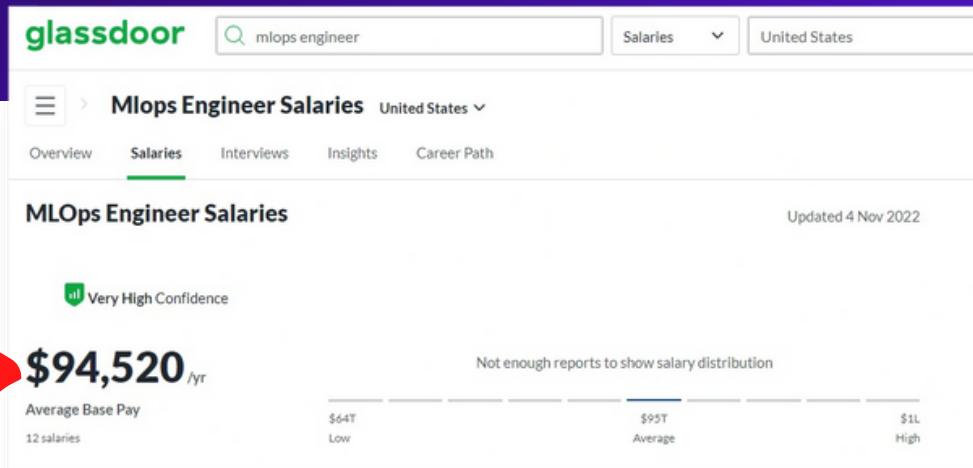
19 [Testimonial](#)



Machine Learning Operations(MLOps)

Hottest Job of 21st Century

Machine learning and artificial intelligence is a field that drives major innovations across different industries. It is predicted that in 2023, the AI market will reach \$500 billion, and in 2030, \$1,597.1 billion in size. This means that machine learning technologies will continue to be in high demand in the near future.



About us



5000+Trained



100+ Workshops & courses



100+ Countries' Learners

Who is Psitron Technologies ? Why should you care?

About Psitron Technologies:

Psitron Technologies is an IoT and AI company. Our mission at Psitron is to connect the world with innovative technologies. Psitron has responsibility for developing innovative innovations for addressing current problems in industries, especially focusing on industry 4.0 solutions.

Supported By



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY



Awards/ Honour



FKCCI Bangalore best
Startup award 2018



Living Talent, Dubai finalist of
international level innovation
competition 2018



Hilti International innovation
competition finalist.



Psitron is supported by AWS
activate program



IoT interThrone winner

About Program

Looking for getting started with Hands-on **Machine Learning Operations (MLOps)** with a real-time project, then you've come to the right place. As per the market survey, **2023 is the year of MLOps** and would become the mandate skill set for Enterprise ML projects.

Corporates have been experimenting with machine learning models for a long time, **85%** of Machine Learning projects do not reach production. In addition, the MLOps have exponentially grown in the last few years. MLOps was estimated at **\$23.2 billion for 2019** and is projected to reach **\$126 billion by 2025**. Therefore, MLOps knowledge will give you numerous professional opportunities helps organizations to bring in real business value

Key Highlights

- **60 Hours** of Live sessions from Industrial Experts
- **50+** Live Hands-on Labs
- **5+ Real-time** industrial projects
- One-on-One Debugging with Industry Mentors

Program Pedagogy



Instructor led Training

Get trained by top industry experts



24*7 Technical Support

Speak to Subject Matter Experts anytime and clarify your queries instantly.



Projects and Exercises

Get real-world experience through Projects



Live Hands-on

Hands-on exercises, project work, quizzes, and capstone projects

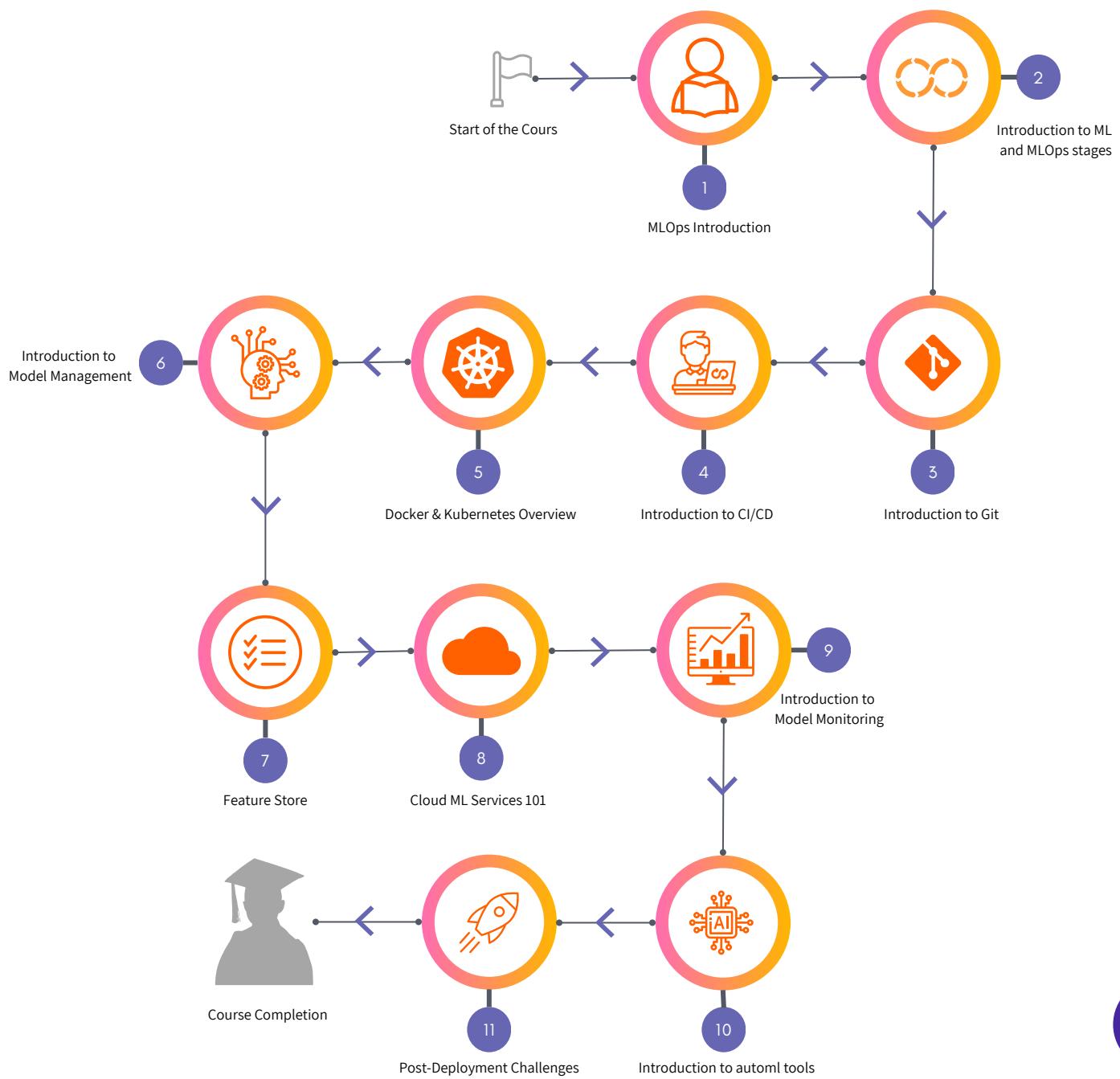


Peer Networking and Group Learning

Improve your professional network and learn from peers through our innovative Peer WhatsApp & community groups.

Who Can Apply for the Course?

- Data Scientists
- Data engineers & Data Analysts
- Research/Applied Scientists
- ML engineers
- DevOps engineers
- Aspiring MLOps Professionals and Enthusiasts
- Machine Learning professionals who want to deploy models to production
- Anyone who wants to learn Docker & Kubernetes, AWS, Azure, GCP, DVC, Feast, MLFlow etc
- Individuals interested in data and AI industry



Program Curriculum



Module 1

MLOps Introduction

- What is MLOps?
- Machine learning industrialisation challenges
- MLOps Motivation: High-level view
- MLOps challenges
- MLOps challenges similar to DevOps
- MLOps Components
- Machine Learning Life Cycle
- How does it relate to DevOps, AIOps, ModelOps, and GitOps?
- Major Phases - what it takes to master MLOps
- CI/CD in Production Case Study

Module 2

Introduction to ML and MLOps stages

- MLOps Maturity Model
- Detailed MLOps and stages
 1. Versioning
 2. Testing
 3. Automation (CI/CD)
 4. Reproducibility
 5. Deployment
 6. Monitoring
- MLOps Architectures
 1. Architectures - Open Source tools - Kubeflow, MLFlow, Metaflow, Kedro, ZenML, MLRun, CML
 2. Architectures - Cloud Native tools - AWS, GCP and Azure
 3. Comparison among cloud-native tools
 4. The cost-benefit approach of each architecture and MLOps maturity
- List of tools involved in each stage (MLOps tool ecosystem)
- Different Roles involved in MLOps (ML Engineering + Operations)

Program Curriculum



Module 3

Introduction to Git [Hands-on]

- Overview of Git
- Understanding branching strategies and REPO
- Standard GIT branching strategies(development, feature, bug, release, UAT)
- Practising important Git commands
- GitHub Action overview and working

Module 4

Introduction to CI/CD [Hands-on]

- Introduction to CI and CD
- CI/CD challenges in Machine Learning
- Steps involved in the CI/CD implementation in ML lifecycle and workflow
- A glimpse of popular Tools used in the DevOps ecosystem on the Cloud.

1.AWS DevOp

- AWS CodeCommit
- AWS CodePipeline
- AWS CodeBuild
- AWS CodeDeploy
- **Project:** AWS DevOps Pipeline

2.GCP DevOps

- Cloud Source Repositories
- Cloud Run
- Cloud Build
- Cloud Deploy
- Artifacts Registry
- **Project:** GCP DevOps Pipeline

3.Azure DevOps

- Azure Boards
- Azure Repos
- Azure Pipeline

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- Azure Test Plans
- Azure Artifacts
- **Project:** Azure DevOps Pipeline

Module 5

Docker & Kubernetes Overview [Hands-on]

- Docker Foundation
- Installing docker on Windows, macOS & Linux
- Managing Container with Docker Commands
- How does it work? Docker registry - Docker Hub
- Building your own docker images
- **Project:** Deploy ML model in docker container
- Kubernetes Overview
- Kubernetes Architecture
 - 1. Nodes
 - 2. Control Plane
 - 3. API Server
- Kubernetes Resource
 - 1. Pod
 - 2. ConfigMap
 - 3. Service
 - 4. Secret
 - 5. Ingress
 - 6. Deployment
 - 7. StatefulSet
 - 8. DaemonSet
 - 9. Volumes (PVC)
- Minikube
- **Project:** Deploy ML model in Kubernetes cluster

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Module 6

Kubernetes Deployment Strategy [Hands-on]

- Monitoring
- Liveness and Readiness Probes
- Labels and Selectors
- **Project:** Deploying an ML Model using Docker and Amazon EKS

Module 7

Introduction to Model Management [Hands-on]

- What is a Model Management
- What are the various activities in Model Management
 - 1. Data Versioning
 - 2. Code Versioning
 - 3. Experiment Tracker
 - 4. Model Registry
 - 5. Model Monitoring
- A high-level overview of the below Model Management tools
 - 1. MLFlow
 - 2. **Project:** Deploy MLFlow stack on the cloud
 - 3. **Project:** Build, train, and deploy an ML model using MLFlow Experiments and MLFlow model registry.
 - 4. DVC
 - 5. Git Large File Storage (LFS)

Module 8

Feature Store [Hands-on]

- Introduction to Feature Stores, SageMaker Feature Store, Vertex AI Feature Store, Databricks, Tecton, Feast, Hopsworks etc.
- Feast open source feature store
- Feature Store: Online Vs Offline

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- **Project:** Deploy Feast Online/Offline feature store
- Online Feature Store using DynamoDB
- Offline Feature Store using S3
- Monitor ML features using Amazon SageMaker Feature Store and AWS Glue DataBrew
- Monitor features programmatically
- Visualizing feature drift over time

Module 9

Cloud ML Services 101 [Hands-on]

- AWS SageMaker
 - 1. Introduction to Amazon SageMaker
 - 2. Using Amazon S3 along with SageMaker
 - 3. Amazon SageMaker Notebooks
 - 4. Notebook instance type, IAM Role & VPC
 - 5. Build, Train & deploy ML Models using SageMaker
 - 6. Endpoint & Endpoint configurations
 - 7. Generate inference from deployed model
- AWS SageMaker Pipelines
 - 1. SageMaker Studio & SageMaker domain
 - 2. SageMaker Projects
 - 3. Repositories
 - 4. Pipelines & Graphs
 - 5. Experiments
 - 6. Model groups
 - 7. Endpoints
 - 8. **Project:** Deploy an end-to-end MLOps pipeline using Sagemaker Studio.
- GCP VertexAI
 - 1. Introduction of Vertex AI
 - 2. Gather, Import & label datasets

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3. Build, Train & deploy ML Solutions
 4. Manage your models with confidence
 5. Using Pipelines throughout your ML workflow
 6. Adapting to changes in data
 7. Creating models with Vertex AI and deploying ML models using ai-platform pipelines
 8. **Project:** Deploy an end-to-end MLOps pipeline using Vertex AI
- Azure MLOps
 1. Azure Machine learning studio
 2. Azure MLOps
 3. Azure ML components
 4. Azure MLOps + DevOps
 5. Fully automated end-to-end CI/CD ML pipelines
 6. **Project:** Deploy an end-to-end MLOps V2 pipeline using Azure Machine Learning

Module 10

Kubeflow Intro [Hands-on]

1. Kubeflow Introduction
2. Kubeflow- Who uses it
3. Kubeflow features
4. Kubeflow Fairing
5. Kubeflow Pipelines
6. Kubeflow use cases
7. **Project:** Pipeline formation with Kubeflow

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Module 11

Introduction to Model Monitoring [Hands-on]

- Importance Of Model Monitoring
- What are the various types of monitoring related to the model
- The architecture of monitoring ecosystem in AWS/Azure/GCP
 - 1. AWS Model Monitoring
 - 2. Azure Model Monitoring
 - 3. GCP Model Monitoring
- Optimize and Manage Models at the Edge
- Common Issues in ML Model Deployment
- Feedback Loop Role
- **Project:** Model & infrastructure monitoring using cloud tools

Module 12

Introduction to automl tools [Demo]

- H2O MLOps
- Valohai
- Domino Data Lab
- neptune.ai
- iguazio
- W&B

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Module 13

Post-Deployment Challenges [Hands-on]

- Post Deployment Challenges intro
- Post Deployment Challenges – ML Related
- Challenges when deploying machine learning to edge devices
- Post Deployment - Monitoring the Drift - Evidently
- Monitoring the Drift - Using SageMaker
- Post Deployment Challenges - Software Engineering Related
- Common Issues in ML Model Deployment
- **Project:** Evidently AI for Monitoring the Drift



Program Curriculum



Skills to Master

- DevOps
- Git
- GitHub
- AWS
- AWS CodeCommit
- AWS CodePipeline
- AWS CodeBuild
- AWS CodeDeploy
- GCP
- Cloud Source Repositories
- Cloud Run
- Cloud Build
- Cloud Deploy
- Artifacts Registry
- Azure
- Azure Boards
- Azure Repos
- Azure Pipeline
- Azure Test Plans
- Azure Artifacts
- Kubernetes
- Amazon EKS
- MLFlow
- DVC
- Git Large File Storage (LFS)
- AWS SageMaker
- Vertex AI
- Feast
- DynamoDB
- S3
- AWS Glue
- SageMaker Pipelines
- Azure Machine learning studio
- Kubeflow
- Evidently

Tools to Master



AWS CodeCommit



AWS CodePipeline



Git Large File Storage



kubernetes



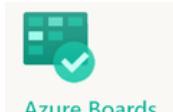
docker



Kubeflow



Program Curriculum



Azure Repos



Azure Pipelines



Azure Test Plans



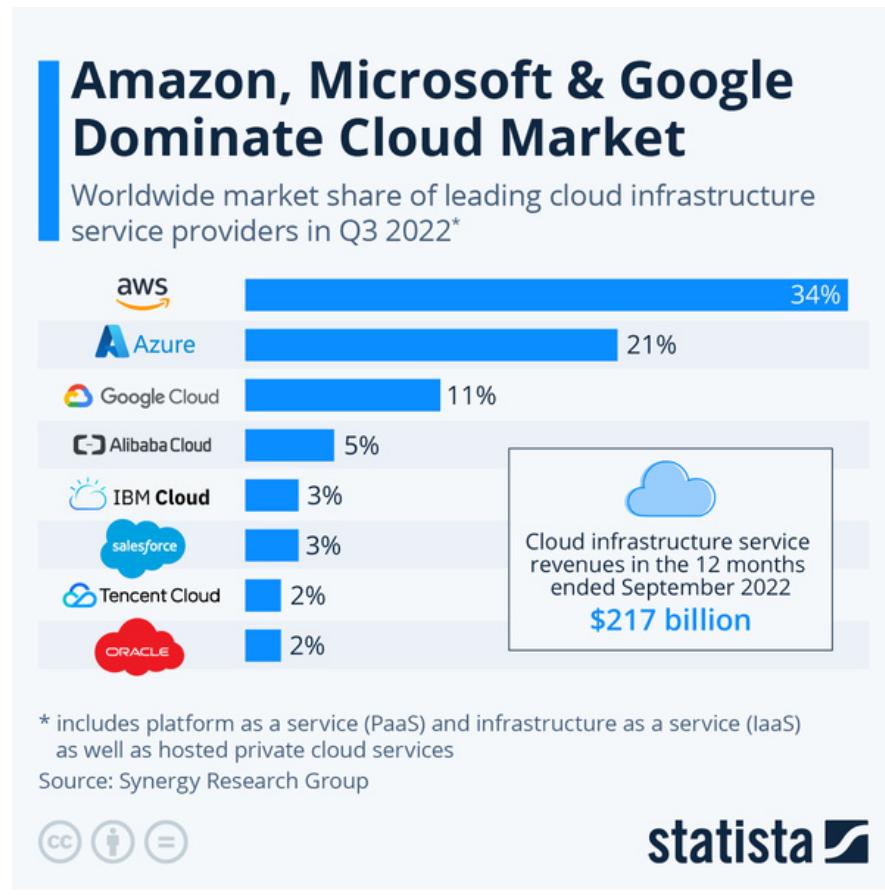
Azure Artifacts



DynamoDB



Why Cloud ?



Program Fee



Basic



- ✓ Live training
- ✓ Access to Recordings
- ✓ Debugging sessions
- ✓ FREE Resources
 - eBooks
 - Webinars
 - Job Update
 - Interview questions
- ✓ Community Support
- ✓ -
- ✓ -
- ✓ -
- ✓ -

Register
Now!

Only for batch of
20 lucky
participants

Advanced



MOST POPULAR

- ✓ Live training
- ✓ Access to Recordings
- ✓ Debugging sessions
- ✓ FREE Resources
 - eBooks
 - Webinars
 - Job Update
 - Interview questions
- ✓ Community Support
- ✓ Resume preparation
- ✓ **6 Month** Job Support
- ✓ Bonus reattendance opportunity

i One sign-up, two chances to attend

- ✓ -

Register
Now!

+

Advanced



- ✓ Live training
- ✓ Access to Recordings
- ✓ Debugging sessions
- ✓ FREE Resources
 - eBooks
 - Webinars
 - Job Update
 - Interview questions
- ✓ Community Support
- ✓ Resume preparation
- ✓ **1 Year** Job Support
- ✓ Bonus reattendance opportunity

i One sign-up, two chances to attend

- ✓ Instant access

i Access to previous batch recordings

Register
Now!

Frequently Asked Questions

1. Do we need to attend all sessions?

Yes, All registered participants have to attend all the sessions.

2. Whether course recording video will be sent to participants?

Yes, Course recorded videos will be sent to all participants.

Note: You will have access for 6 Months after this course.

3. What about Certificate?

All registered participants will get a digital certification copy signed by Instructor from Psitron Technologies Pvt. Ltd.

4. What other opportunities?

Every registered participant will be added to our community groups after this course so that you can explore more about ML/AI/MLOps/AWS/Azure/GCP.

5. Opportunity for students?

Students will give the opportunity to work with our team as an intern for one month on real-time industrial projects for no cost.

6. What are the prerequisites?

Any person from a science & engineering background can attend this workshop, No programming expertise is needed.



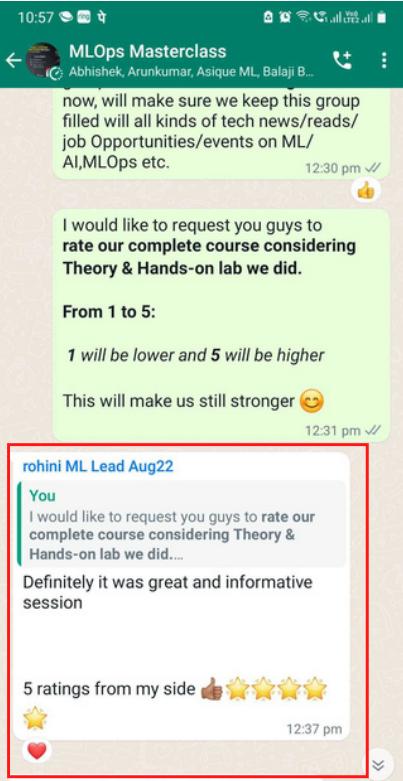
Glimpse of our happy participants



★ 4.2
33 reviews



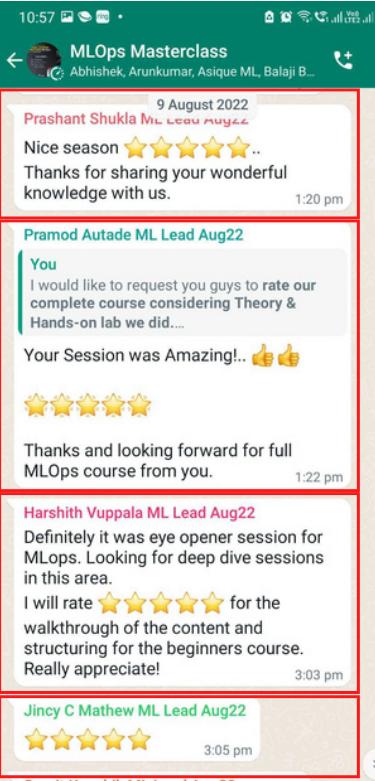
Reviews For Organizer ★ 4.7 (20)



rohini ML Lead Aug22

You
I would like to request you guys to rate our complete course considering Theory & Hands-on lab we did....
Definitely it was great and informative session

5 ratings from my side

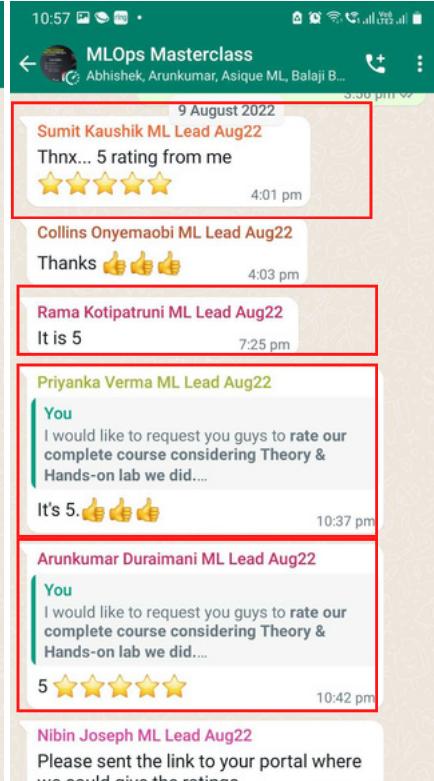


Prashant Shukla ML Lead Aug22
9 August 2022
Nice season ★★★★★...
Thanks for sharing your wonderful knowledge with us.

Pramod Autade ML Lead Aug22
You
I would like to request you guys to rate our complete course considering Theory & Hands-on lab we did....
Your Session was Amazing!..

Harshith Vuppala ML Lead Aug22
Definitely it was eye opener session for MLOps. Looking for deep dive sessions in this area.
I will rate ★★★★★ for the walkthrough of the content and structuring for the beginners course.
Really appreciate!

Jincy C Mathew ML Lead Aug22



Sumit Kaushik ML Lead Aug22
9 August 2022
Thnx... 5 rating from me

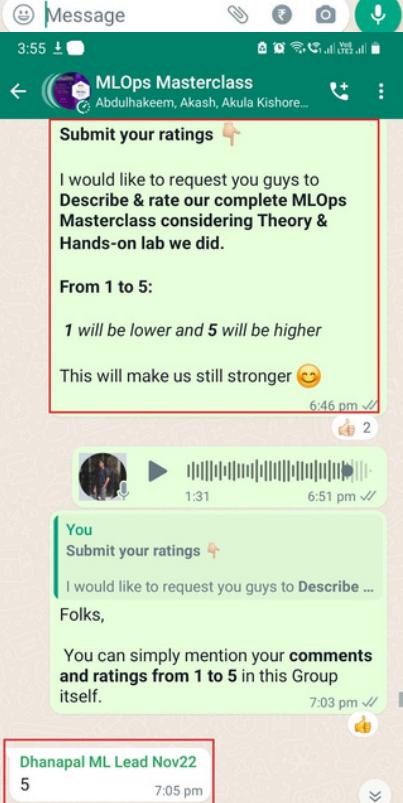
Collins Onyemaobi ML Lead Aug22
Thanks

Rama Kotipatruni ML Lead Aug22
It is 5

Priyanka Verma ML Lead Aug22
You
I would like to request you guys to rate our complete course considering Theory & Hands-on lab we did....
It's 5.

Arunkumar Duraimani ML Lead Aug22
You
I would like to request you guys to rate our complete course considering Theory & Hands-on lab we did....

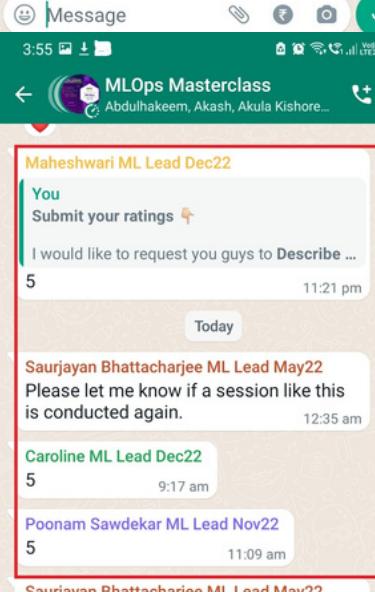
Nibin Joseph ML Lead Aug22
Please sent the link to your portal where we could give the ratings



Dhanapal ML Lead Nov22
5

You
Submit your ratings

I would like to request you guys to Describe & rate our complete MLOps Masterclass considering Theory & Hands-on lab we did.
From 1 to 5:
1 will be lower and 5 will be higher
This will make us still stronger



Maheshwari ML Lead Dec22
You
Submit your ratings

I would like to request you guys to Describe ...

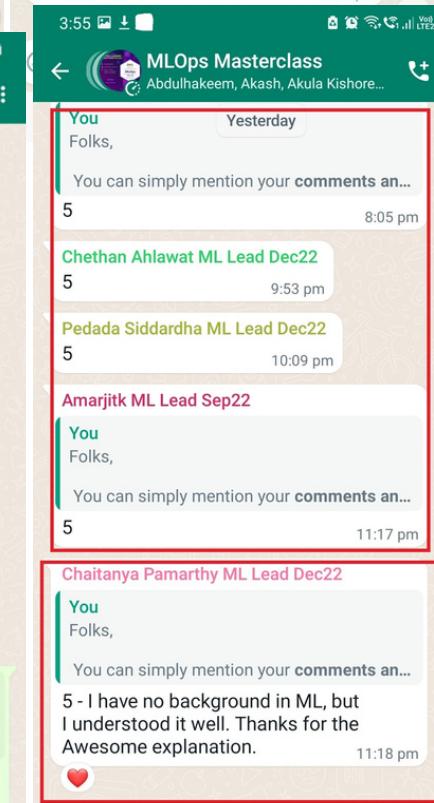
Saurjayan Bhattacharjee ML Lead May22
Please let me know if a session like this is conducted again.

Caroline ML Lead Dec22
5

Poonam Sawdekar ML Lead Nov22
5

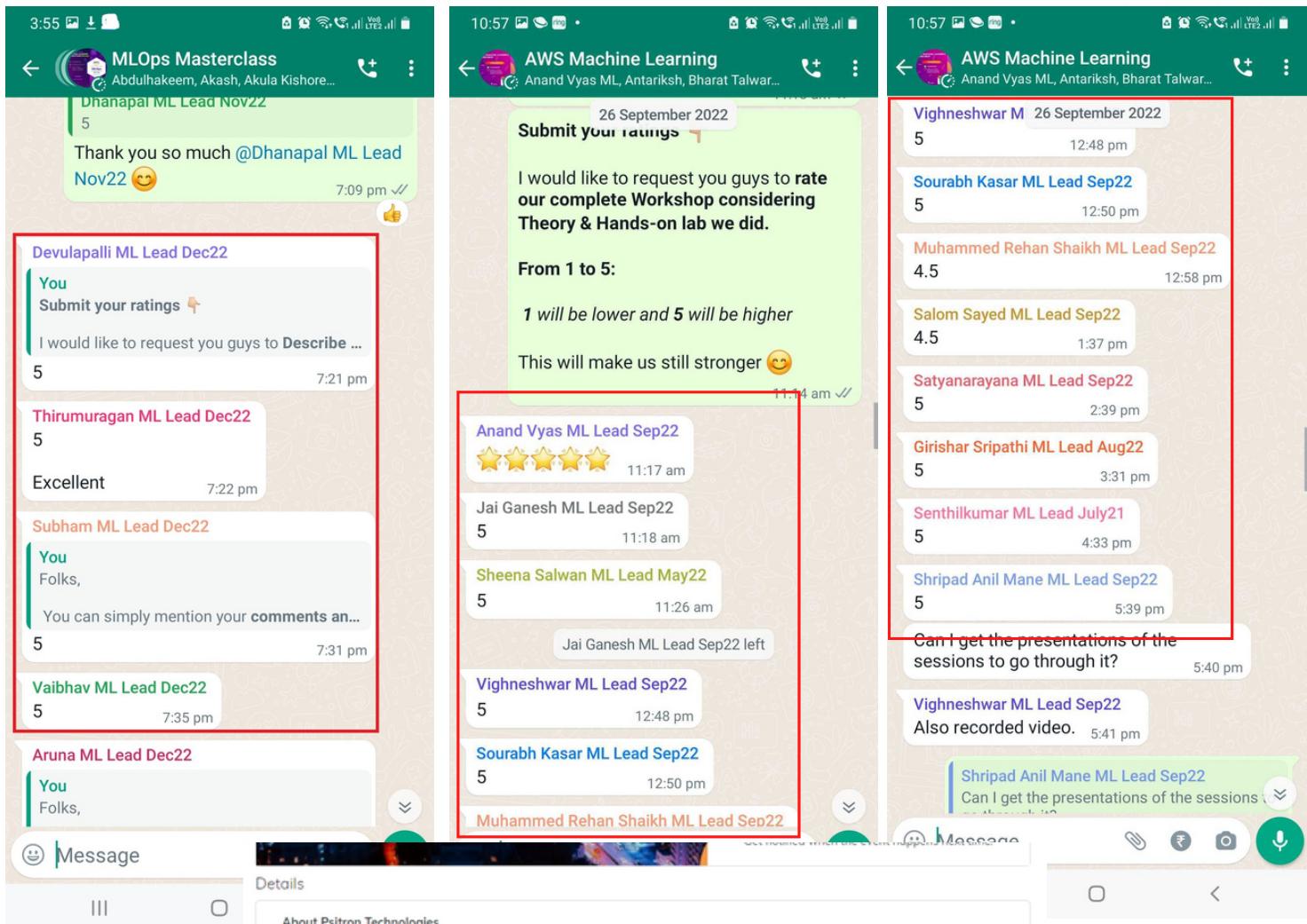
Saurjayan Bhattacharjee ML Lead May22
Can you share the link of the all the materials and the recordings

You
Hello Folks,
Please check your Google Doc, Now we hav...
@Saurjayan Bhattacharjee ML Lead May22 ,please check your Email,we have



Chaitanya Pamarthy ML Lead Dec22
You
Folks,
You can simply mention your comments an...
5 - I have no background in ML, but I understood it well. Thanks for the Awesome explanation.

Glimpse of our happy participants



Details

About Psitron Technologies

Psitron Technologies is an IoT and AI startup. Our mission at Psitron is to connect the world with innovative technologies. Psitron has responsibility for developing innovative innovations for addressing current problems in industries, especially focusing on Industry 4.0 solutions.

Do you know?

According to a Gartner report, Artificial Intelligence (AI) is estimated to pave the way for close to 2.3 million opportunities in upcoming years. And if you look at a report from Indeed, vacancies in the realm of artificial intelligence has doubled over the last three years.

[+ Show More](#)

Map & Directions

CIDA #22, 1st A Cross Rd, Srinivasanagar, Hanumanthnagar, Banashankari Stage I, Banashankari, Bengaluru, Karnataka 560019, India

Reviews 4.6★ (5)

★★★★★ It was insightful. Recommended for beginners!! - by Marioj for Machine Learning & Artificial Intelligence in Amazon Web Services Workshop - With SarathKumar. Wed, 19 Feb

★★★★★ Thanks for providing Hands-on workshop, really informative & fun - by Prabhu for Machine Learning & Artificial Intelligence In Amazon Web Services Workshop - With SarathKumar. Mon, 17 Feb

★★★★★ The workshop was more informative & Hands-on, had a good experience in exploring AWS machine learning services. - by Meena for Machine Learning & Artificial Intelligence In Amazon Web Services Workshop - With SarathKumar. Mon, 17 Feb

Write a Review

Glimpse of our happy participants

Srinivas ML Lead Jan20

Done with my certification last week

Psitron ML/AI:10

Thanks for adding @Akhil ML Lead July21

Sure thank you sarath... I recently started learning advanced python, your session really helps , please share any learning repositories in GitHub of yours if possible... Just a suggestion - some more detailed comments in your code would really help from learning perspective

Machine Learning Course 3

You can just reply to this message by typing number

Psitron ML/AI:10

Ashok Kumar ML Lead July21

Rating:5
Thanks for the workshop.
Teaching & Presentation skills - Very Good.

Subham Kumar Roy

Businesses are driven by data and they are looking to artificial intelligence (AI) for the future of data management and analysis. In many ways, #AI and #cloud computing make the perfect match for data driven innovation.

Machine Learning Course 3

Thank you so much Madhana for rating us 😊

Machine Learning Course 3

Hello Folks,

I would like to request you guys to rate our complete course considering Theory & Hands-on lab we did.

Machine Learning Course 3

From 1 to 5:
1 will be lower and 5 will be higher

Machine Learning Course 3

Theory: 5
Hands-on: 5

Machine Learning Course 3

Thank you so much for your feedback

Machine Learning Course 3

Theory: 4
Hands-on: 5

CERTIFICATE OF COMPLETION

SUBHAM KUMAR ROY

For completing the Two-day workshop on Machine Learning using the AWS cloud platform, and demonstrating the ability to explain the following:

- Build, train, and deploy machine learning models
- Using Amazon S3
- Using Amazon SageMaker
- Amazon Machine Learning Services

DATE

Leave your thoughts here...

Register Now

Glimpse of our happy participants

★★★★★ Sun, 16 Feb
Explained in very simple language. Looking forward for more workshops - by Usha for Machine Learning & Artificial Intelligence in Amazon Web Services Workshop - With SarathKumar .
Show Less

Reviews For Organizer 4.7★ (20) Write a Review Wed, 19 Feb
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★★★★★ Sun, 16 Feb
Got a good intro to AWS. It was great. - by Kiran Pai for Machine Learning & Artificial Intelligence in Amazon Web Services Workshop - With SarathKumar organized by SHARATH KUMAR .

★★★★★ Sun, 16 Feb
Explained in very simple language. Looking forward for more workshops - by Usha for Machine Learning & Artificial Intelligence in Amazon Web Services Workshop - With SarathKumar organized by SHARATH KUMAR .

★★★★★ Mon, 30 Dec
Really a workshop was good to get started with IoT & AWS - by Radha for Internet of things (IoT) in Amazon Web Services Workshop - With SarathKumar organized by SHARATH KUMAR .

★★★★★ Tue, 12 Nov
Really a workshop was good to get started with IoT & AWS - by Radha for Internet of things (IoT) in Amazon Web Services Workshop - With SarathKumar organized by SHARATH KUMAR .

★★★★★ Fri, 25 Oct
The event was real good. Sharath has explained the things in the short span of time very well.I keep looking for more event like this - by Praveen S for Machine Learning & Artificial Intelligence in AWS - With SarathKumar organized by SHARATH KUMAR .

★★★★★ Fri, 04 Oct
GREAT - by Raghu for Internet of things (IoT) in Amazon Web Services Workshop - With SarathKumar organized by SHARATH KUMAR .

★★★★★ Fri, 04 Oct
Best workshop for peoples one who looking to start their IoT career. - by Latha for Internet of things (IoT) in Amazon Web Services Workshop - With SarathKumar organized by SHARATH KUMAR .

★★★★★ Fri, 04 Oct
Great workshop, Had a good experience connecting IoT device to cloud. - by Manjunath for Internet of things (IoT) in Amazon Web Services Workshop - With SarathKumar organized by SHARATH KUMAR .



Psitron



Contact Us

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Founder & CEO
Psitron Technologies Pvt. Ltd.



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sarath@psitrontech.com



www.psitrontech.com

P.S. - Today, don't play it safe, play it smart.

[Register Now](#)