

School of Computer Information and Mathematical Sciences

Department of Computer Science & Engineering

One Week Faculty Development Programme(FDP)

On

Generative AI & AWS Cloud

In association with

Imarticus Learning & Webx 360 Technology Solution

Date: 28th June 2024 to 3rd July 2024

Programme Coordinators:

Dr.E.Syed Mohamed, Professor, CSE

Dr.S.Syed Abdul Syed, Professor, CSE

Convenors:

Dr. Sharmila Sankar, Dean(SCIMS)

Dr.Aisha Banu W.,HOD/CSE

Co-Coordinator:

Dr. A.Alif Siddiqua Begum, Asst. Professor/CSE

Ms. S.M.Shifana Rayesha, Asst. Professor/CSE

EVENT BROCHURE



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
In Association with Imarticus Learning Organizes

One week Online

Faculty Development Programme(FDP)
on
Generative AI & AWS Cloud

28th June – 03rd July 2024
10:00 AM - 1:00 PM

Registration Fee : Rs. 300/-

Convenors:
Dr. Sharmila Sankar, Dean(SCIMS)
Dr. Aisha Banu W., HOD/CSE

SCAN TO REGISTER



Coordinators:
Dr. E.Syed Mohamed
Dr. S.Syed Abdul Syed

Co-Cordinators:
Dr. A.Alif Siddiqua Begum
Ms.Shifana Rayesha

E-Certificate will be provided to all participants

School of Computer Information and Mathematical Sciences

Faculty development Programme report(FDP)

Name of the FDP: Generative AI & AWS Cloud

Date : 28th June 2024 – 3rd July 2024

Total number of participants attended the FDP : 40

Department of Computer Science and Engineering, B S Abdur Rahman Crescent Institute of Science and Technology, in association with Imarticus Learning & Webx 360 Technology solution has organized a One week Faculty Development Programme on Generative AI & AWS Cloud held from 28.06.2024 to 03.07.2024.

The workshop was coordinated by Dr.E.Syed Mohammed, Professor/CSE, Dr.S.Syed Abdul Syed, Associate Professor/CSE, and co-coordinated by Dr. Alif Siddiqua Begum, and Ms. S.M. Shifana Rayesha.

Objective of FDP

- This FDP aims to provide an in-depth understanding of Generative AI & AWS Cloud, its tools, and applications.
- Hands-on experience with Generative AI tools and frameworks.
- Insights into the latest trends and advancements in AI technology.
- Deployment of Dynamic Web Application on AWS Cloud.

Resource Person Description

Mr. Harish Kumar



Lead Data Scientist, IRIS Software Group, India

Mr. Harish Kumar has more than 10 years of experience in Generative AI, Natural Language Processing(NPL), Deep Learning(DL). He is presently associated with IRIS Software Inc., as Lead Data Scientist.

Mr. Afzal Bijli FHM



MEASI Institute of Information Technology, Chennai, Asst. Professor,

Afzal has more than 10 years of experience in teaching undergraduate and postgraduate students of Computer Science Engineering and Computer Applications. His knowledge domain includes Cloud Computing, Website Development, Software Engineering, and Information Security.

Schedule for Online FDP – Generative AI & AWS Cloud

Day	Date	Time	Topic to be covered /Resource persons
1.	28.06.2024	9.00 to 9.30 am	Registration
		9.30 to 10.00 am	Inauguration
		Resource Person	Mr. Harish Kumar , Lead Data Scientist, IRIS Software Group, UK
		10.00 to 11.15 am	Day 1 (Session 1) - From Information to Knowledge in Generative AI
		11.15 to 11.30 am	Tea Break
		11.30 to 1.00 pm	Day 1 (Session 2) – Generative AI opportunity, potential risks and challenges
2.	29.06.2024	Resource Person	Mr. Harish Kumar , Lead Data Scientist, IRIS Software Group, UK
		10.00 to 11.15 am	Day 2 (Session 3) – Dive into the world of Generative AI, LLMs and tools like ChatGPT
		11.15 to 11.30 am	Tea Break
		11.30 to 1.00 pm	Day 2 (Session 4) – Prompt Engineering: ChatGPT quality output dependency on quality input.
3.	01.07.2024	Resource Person	Mr. Afzal Bijli FHM , MEASI Institute of Information Technology, Chennai.
		10.00 to 11.15 am	Day 3 (Session 5) – Introduction to AWS Cloud and IMA (Identity Access Management)
		11.15 to 11.30 am	Tea Break
		11.30 to 1.00 pm	Day 3 (Session 6) – Static website deployment on AWS, S3 Bucket (AWS storage), usage of SSH & PUTTY software, Creating & managing private keys and AWS pricing walkthrough.

4.	02.07.2024	Resource Person	Mr. Afzal Bijli FHM , MEASI Institute of Information Technology, Chennai.
		10.00 to 11.15 am	Day 4(Session 7) – AWS Console basic walkthrough, ELB(Elastic Load Balancing) and ASG(Auto Scaling Group).
		11.15 to 11.30 am	Tea Break
		11.30 to 1.00 pm	Day 4(Session 8) – Real-time implementation of ELB & ASG, dynamic web hosting, assigning Static IP address and Domain name
5.	03.07.2024	Resource Person	Mr. Afzal Bijli FHM , MEASI Institute of Information Technology, Chennai.
		10.00 to 10.40 am	Day 5(Session 9) – Case study of AWS Cloud, Opportunities and future direction
		11.00 to 4.00 pm	Feedback/Assessment/valedictory

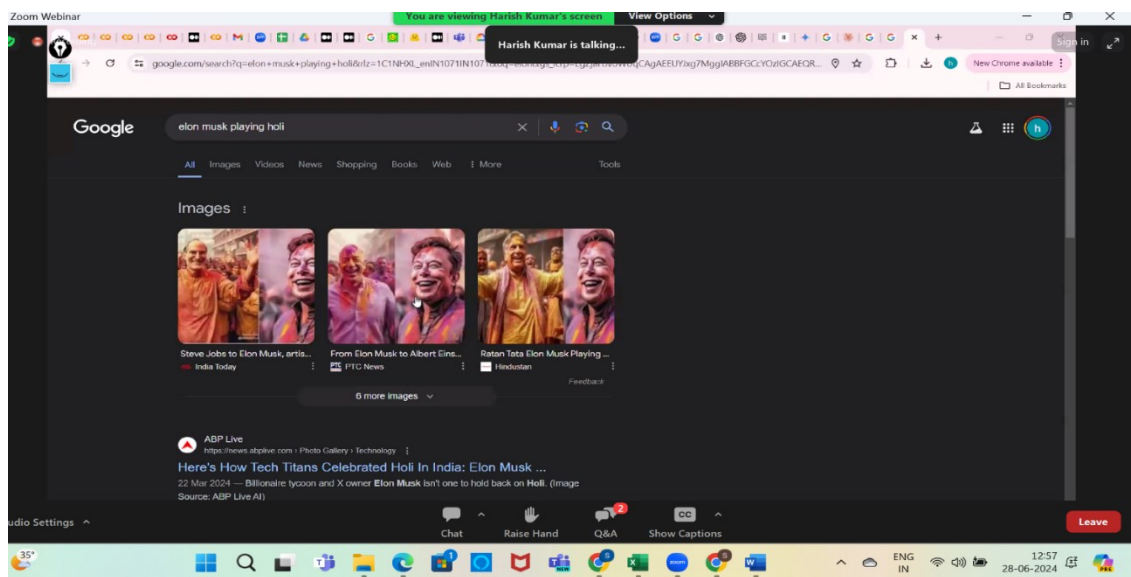
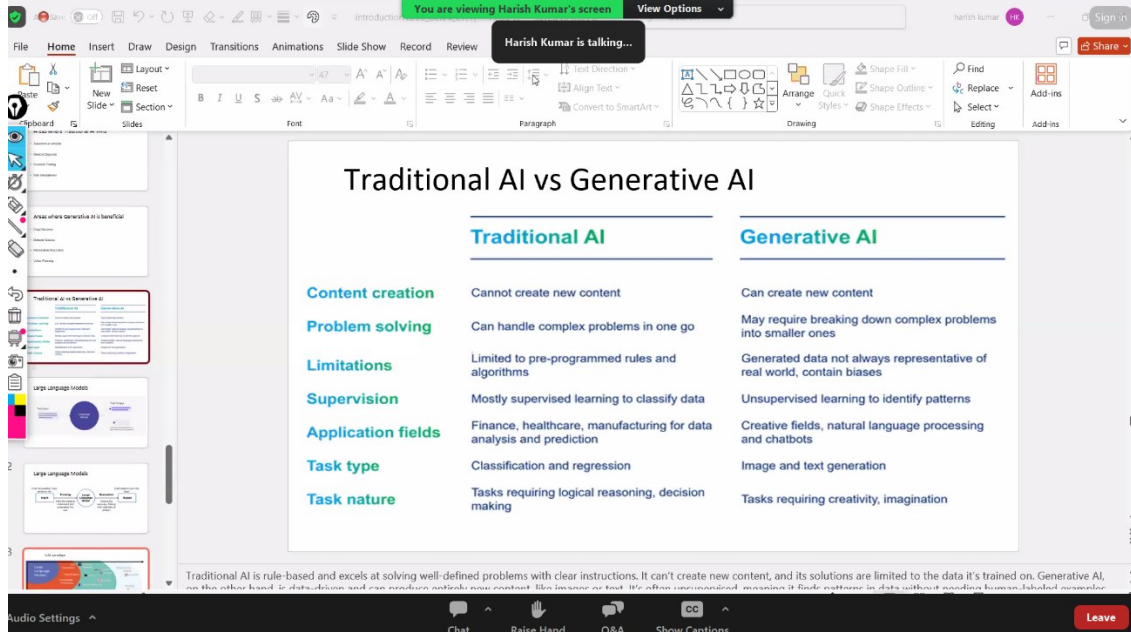
Day-1 (28.06.2024)

Inauguration of FDP:

The inauguration was held on 28th June 2024 online at 9.30 am. **Dr. E.Syed Mohamed** Co-ordinator of FDP, Professor/CSE Department, B.S.A. Crescent Institute of Science & Technology welcomed the gathering.

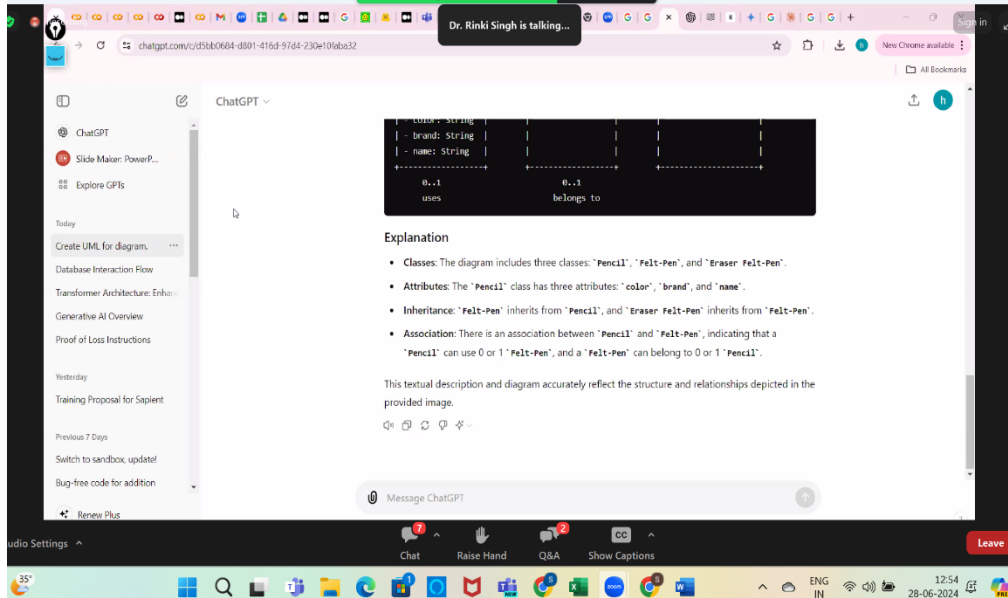
Session 1:

Mr. Harish Kumar, the session's resource, educated the participants about the objective, importance and numerous sources of Generative AI literature. He states that Generative AI is still under development even though its trained to perform many kinds of tasks, including writing different kinds of creative content, translating languages and coding.



Session 2:

Mr. Harish Kumar projected a clear knowledge of importance in Generative AI, how to develop them and how to communicate with them. The speaker believes that generative AI as an opportunity for most people but it is important to be aware of the potential risks and challenges. He addressed the fundamental ideas in technology, tying them to the most appropriate real-life situations that are necessary for comprehending the technology.



Day-2

Session 3:

Mr. Harish Kumar discussed Generative AI tools and conducted a hands-on session using Gemini and ChatGPT and its application in extracting emails from our mail, providing textual summary of video content by passing its youtube link and so on. He demonstrated GPT-4 Turbo with vision capabilities as a large multimodal model(LMM) incorporating both natural language processing and visual understanding.

Zoom Webinar | You are viewing Harish Kumar's screen | View Options

Harish Kumar

WHAT IS PROMPT?

- Prompts are instructions given to an LLM(Large Language Model) to enforce rules, automate processes, and ensure specific qualities (and quantities) of generated output. Prompts are also a form of programming that can customize the outputs and interactions with an LLM.

Elements of a Prompt

- A prompt is composed with the following components:
 - Instructions
 - Context
 - Input data
 - Output indicator

```

Classify the text into neutral, negative or positive
Text: I think the food was okay.
Sentiment:
  
```

Audio Settings | Chat | Raise Hand | Q&A | Show Captions | Leave

Zoom Webinar | You are viewing Harish Kumar's screen | View Options | Recording | Sign in

ELEMENTS OF PROMPTS

The diagram shows a hand with five fingers. Each finger is labeled with a component of a prompt:

- Index finger: Role
- Middle finger: Task
- Ring finger: Content
- Little finger: Guidelines
- Thumb: Output Format

Below the hand is a Windows taskbar with various application icons and system tray icons. At the bottom of the screen, there is a Zoom control bar with buttons for Chat, Raise Hand, Q&A, Show Captions, and a red Leave button.

Session 4:

Mr. Harish Kumar, the session's speaker, emphasized the importance of prompt engineering for Generative AI applications where the quality of ChatGPT outcome is based on writing a clear prompt instruction which consist of clearly stated roles and content for performing the task efficiently. He also outlined coding of ChatGPT Open API and building chatboard code through LangChain framework.

The screenshot shows the OpenAI documentation page for GPT-4o. The page title is "GPT-4o". The main text describes GPT-4o as the most advanced model, multimodal, and more efficient than GPT-4 Turbo. A table lists the model details:

MODEL	DESCRIPTION	CONTEXT WINDOW	TRAINING DATA
gpt-4o	New GPT-4o Our most advanced, multimodal flagship model that's cheaper and faster than GPT-4 Turbo. Currently points to gpt-4o-2024-05-13.	128,000 tokens	Up to Oct 2023
gpt-4o-2024-05-13	gpt-4o currently points to this version.	128,000 tokens	Up to Oct 2023

Below the table, there is a section for "GPT-4 Turbo and GPT-4" which describes GPT-4 as a large multimodal model with greater accuracy than previous models.

The screenshot also shows a sidebar with navigation options like "Personal", "Dashboard", "Docs", and "API reference". A video thumbnail of Harish Kumar is visible in the top right corner of the page content.

Day-3

Session 5:

The day 3 session was delivered by Mr. Afzal Bijli FHM, on “AWS Cloud”. He gave introduction about AWS (Amazon Web Services) cloud stating it as a “pay as you go” service with hands-on using user creation, policies and roles. During the session, he interacted with the audience by asking questions. The speaker highlighted Amazon Web Services (AWS) as the world’s most comprehensive and boardly adopted cloud service.

S.No	Topic Covered	AWS Service
Topic : Cloud Basics Timing : 10.00 am - 11.15 am		
1	Introduction to AWS Cloud	
2	AWS Console Basic Walkthrough	
3	User Creation, User Policies, User Roles & Multi Factor Authentication (MFA), Alias account name	IAM - (Identity Access Management)
Topic : Static website deployment on AWS Timing : 11.30 am - 01.00 pm		
4	Preparing the environment & Deploying of Static Website on the AWS Ubuntu Cloud Server	EC2 - (Elastic Cloud 2)
5	Storing Files on AWS Storage	S3 Bucket - (Storage Bucket Version 3)
6	Creating & managing the private keys	EC2 - (Elastic Cloud 2)

Cloud Service Models

On Premise	IaaS: Infrastructure as a Service	PaaS: Platform as a Service	SaaS: Software as a Service
Applications	Applications	Applications	Applications
Runtime	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
OS	OS	OS	OS
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

Examples

Session 6:

Mr. Afzal Bijli FHM, the session’s speaker discussed the static website deployment on AWS hands-on training. Clearly described about S3 (Simple Storage Service) bucket creation using AWS management console and how to use Putty-private key

to connect amazon EC2 linux instance. He also reviewed how to balance performance, availability and cost when selecting an AWS pricing model.

The screenshot shows a Zoom meeting window titled "1st July to 3rd July 2024- AWS Cloud and Online". The meeting controls at the top include "Pop out", "Chat", "People", "Raise", "React", "View", "Rooms", "Apps", "More", "Camera", "Mic", "Share", and a "Leave" button. The participant list shows "NA" (NIAZ AHA...), "D" (On hold), and "SR". A video thumbnail of a man is visible in the top left. The main content is a browser window displaying the "Multi-factor authentication" page for an Amazon account. The page includes a "Submit" button and a "Troubleshoot MFA" link. A promotional banner for "Build event-driven architectures on AWS" is also visible. The meeting chat on the right shows messages from KAMARUNNISHA, Fariha, Dr. Abdul Azeez Khan, and NIAZ AHAMED, with a "continue sir" message at the bottom.

The screenshot shows the same Zoom meeting window, but the browser window now displays the "Console Home" page of the AWS Management Console. The "Recently visited" section lists services like IAM, EC2, CloudWatch, S3, Billing and Cost Management, AWS Organizations, and IAM Identity Center. A dropdown menu is open, showing a list of AWS regions: Africa (Cape Town), Asia Pacific (Hong Kong), Asia Pacific (Hyderabad), Asia Pacific (Jakarta), Asia Pacific (Mumbai), Asia Pacific (Osaka), Asia Pacific (Seoul), Asia Pacific (Singapore), Asia Pacific (Sydney), Asia Pacific (Tokyo), and Canada (Central). The meeting chat on the right remains the same as in the previous screenshot.

Day- 4

Session 7:

The fourth day of AWS Cloud program started with a session on “Elastic Load Balancing(ELB) and Auto Scaling Group(ASG)”. The session was handled by Mr. Afzal Bijli FHM. The speaker started with a summary of previous session continuing with his hands-on session on ELB that monitor health of its registered targets, and route traffic only to the healthy targets. He gave brief introduction about AGS to scale cloud services based on defined situations.

The screenshot shows a Zoom meeting interface. At the top, the meeting title is "1st July to 3rd July 2024- AWS Cloud and Online". The meeting controls bar includes options for Pop out, Chat, People, Raise, React, View, Rooms, Apps, More, Camera, Mic, Share, and a Leave button. A video thumbnail of the speaker, Afzal Bijli, is visible on the left. The main content area displays a presentation slide titled "Cloud Service Models".

The presentation slide is divided into four columns representing different service models:

- On Premise:** Applications, Runtime, Hardware, OS, Servers, Storage, Networking.
- IaaS: Infrastructure as a Service:** Applications, Runtime, OS, Servers, Storage, Networking.
- PaaS: Platform as a Service:** Applications, Data, Runtime, OS, System, Servers, Storage, Networking.
- SaaS: Software as a Service:** Applications, Data, Runtime, Middleware, OS, Cloud, Servers, Storage, Networking.

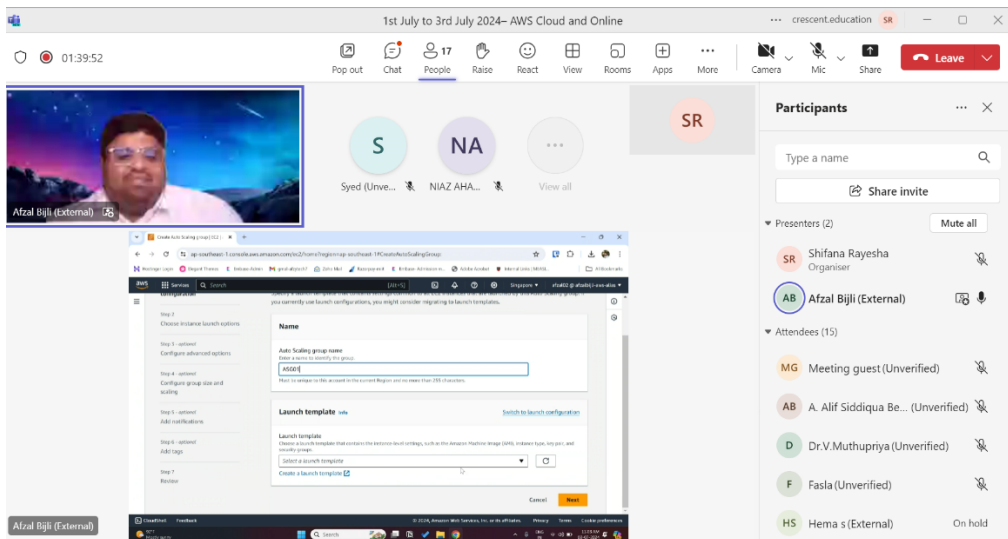
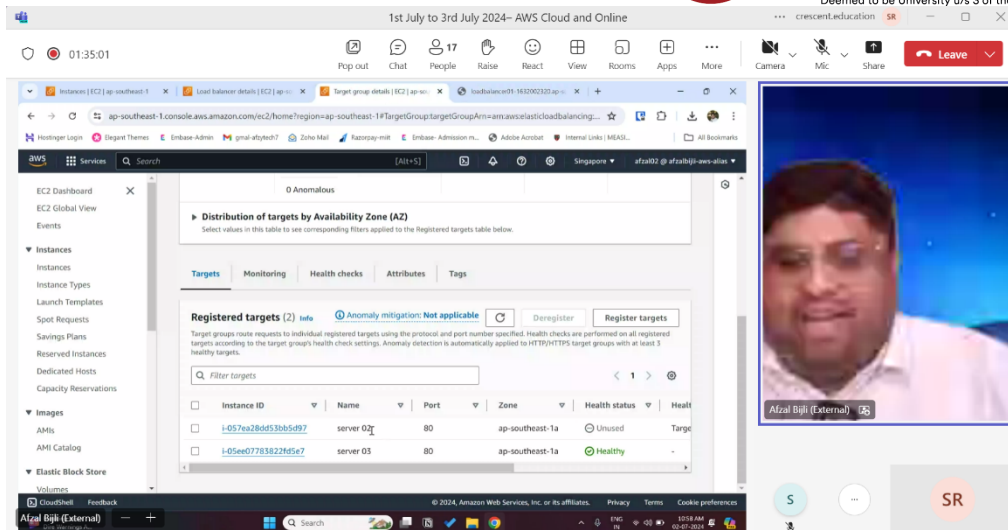
Below the diagram, there are four examples listed:

1. On-Premise - Rack Servers on the premises
2. IaaS - AWS, Digital Ocean, Linode servers
3. PaaS - Google App Engine
4. SaaS - Netflix, Youtube

On the right side of the Zoom window, a transcript is visible, showing a message from Afzal Bijli (External) at 10:08: "so aws is an infrastructure as a service so where we get all the infrastructure or the huge infrastructure whatever". Below it, a message from Shifana Rayesha indicates that transcription has started.

Session 8:

Mr. Afzal Bijli FHM, gave real-time demonstration of ELB and ASG by launching windows instance on AWS cloud, showcasing its magical outcome using real-life application scenario along with hosting dynamic web contents. The speaker highlighted the need for elastic IP address used by AWS to manage its dynamic cloud computing services and briefly discussed XAMPP open-source software package for developing and testing web applications.



Day-5

Session 9:

The last day of Generative AI and AWS Cloud Programme was concluded by Mr. Afzal Bijli. He summarized various technical aspects of AWS Cloud Service and discussed how they may be used in practical applications including case studies to ensure successful outcome. Later on, quiz was conducted for participants followed by feedback. The last session on AWS Cloud end with a valedictory function.

Valedictory Session:

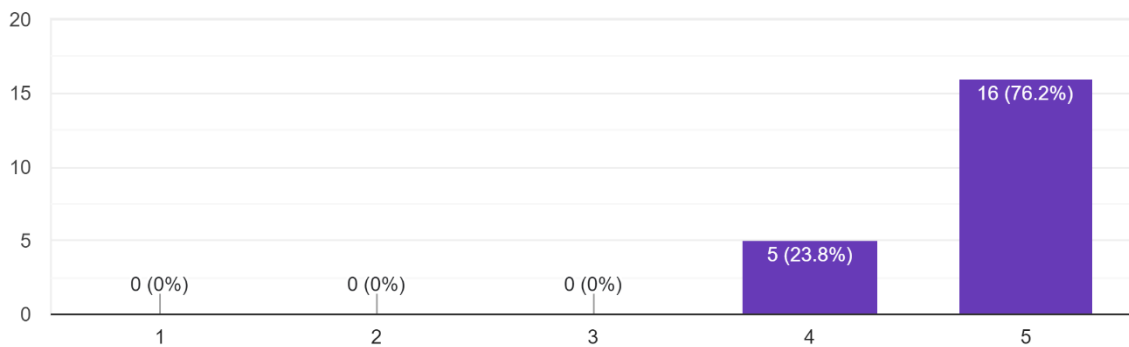
The Valedictory Session of a week-long Faculty Development Program FDP on Generative AI & AWS Cloud, which received an overwhelming response from participants, came to a close. This unique user-friendly programme combines real-world bitcoin, practical hands-on sessions, and knowledgeable faculty and researchers. **Dr. S. Syed Abdul Syed,**

Associate Professor/Department of Computer Science and Engineering, BSACIST, gave vote of thanks in which he expressed his gratitude to all the dignitaries who took the time to share their knowledge with the participants. he expressed gratitude to IMARTICUS Learning & WEBXO 360 Technology solutions for their support for successfully conducting this Faculty Development Program. **Dr. E. Syed Mohamed** Professor/Department of Computer Science and Engineering Thanked the Dean, and the HoD for supported to conducted the Faculty Development Program. Finally, he thanked the resource person and participants for the participation.

Feedback from the Participants:

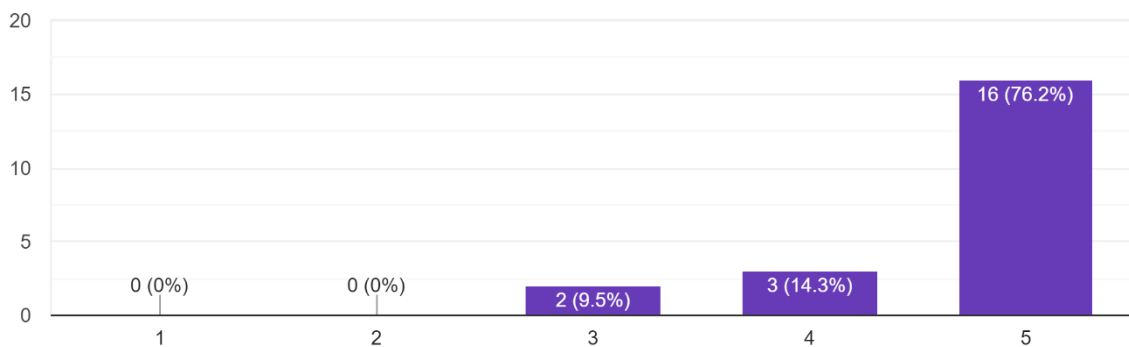
Rate the Delivery of Speaker

21 responses



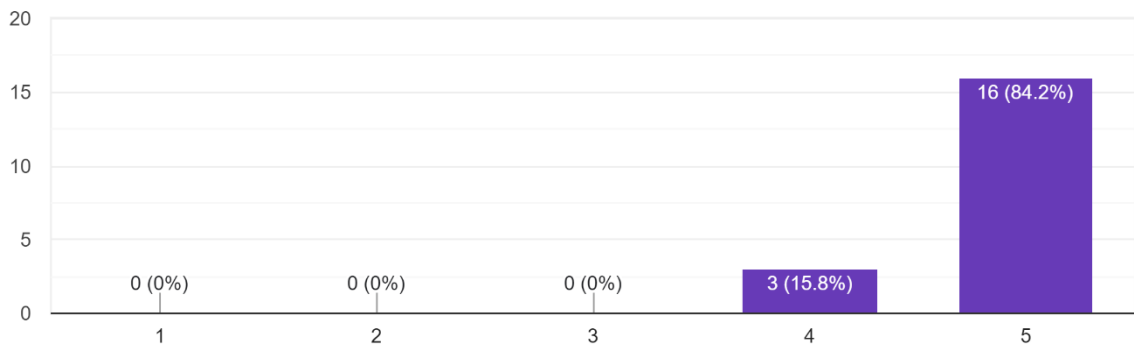
Rate the clarity and organization of the sessions on AWS Cloud

21 responses



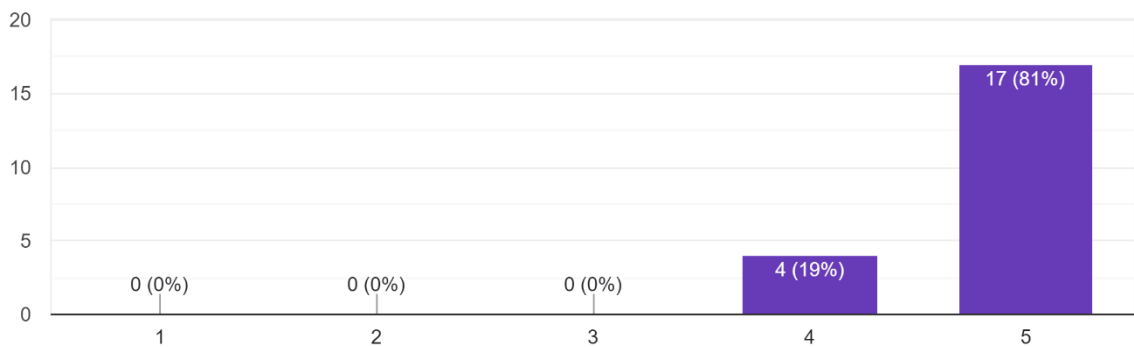
Rate the FDP Session [Content Quality]

19 responses



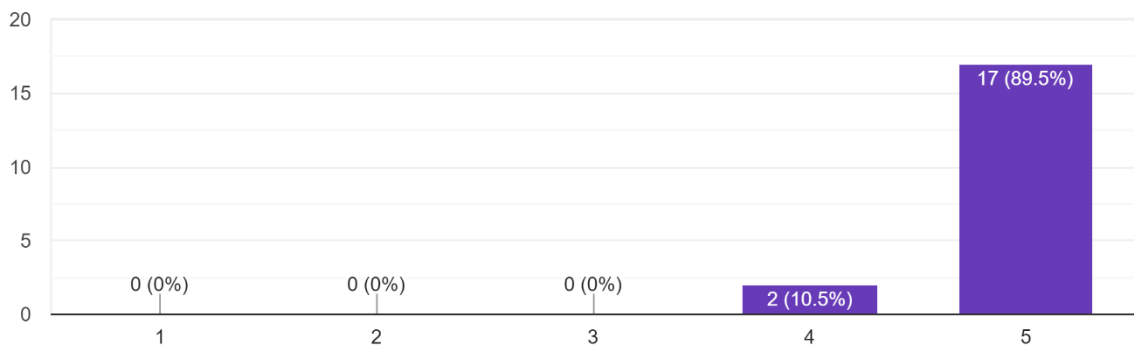
Whether the learning objectives of the FDP clearly communicated and achieved during the sessions

21 responses



Rate the clarity and organization of the sessions on Generative AI

19 responses



Any Suggestions?

19 responses

Good

No

Good

Excellent

Great

nil

Nil

Please provide the recorded video for the first two days

Any Suggestions?

21 responses

Nil

No

Good

Good

Very informative session

Good for beginners

Kindly share the ppts

Participants from various institutions were satisfied with the Faculty Development Program approach and expressed their gratitude towards the learning experience.

List of Participants

S.No	Participant Name	Email Address	College Name
1.	NIAZ AHAMED	niazahamed.ca@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
2.	Subhashni R	subhashniraj2018@gmail.com	St.Peter's Institute of Higher Education and Research
3.	SOUNDARIYAANANDHAN	Soundariya@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
4.	H. FAHEEMNIKHAT	faheemnikhat@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
5.	NOORFASLA	noorfasla@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
6.	BALA GAYATHRID	balagayathri@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
7.	KHATHIJATH FARIHAS	khathijath@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
8.	ChitraA	chitramscphilcs@gmail.com	DRBCCC HINDU COLLEGE
9.	AMSAVALLIS	amsavalli@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
10	RAJAKUMARISATHISH	grajiapk@gmail.com	St.Peter's Institute of Higher Education and Research
11	Hemalatha S	hemalatha185@gmail.com	B.S Abdur Rahman Crescent Institute of Science & Technology
12	KAMARUNNISHA H	kamarunnisha@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
13	JOY KIRUBA P	joykiruba@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
14	PREETHIC	preethisri.c@gmail.com	B.S Abdur Rahman Crescent Institute of Science & Technology
15	JAVUBARSATHICK	javubar@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
16	Dr. A. ABDUL AZEEZ KHAN	abdulazeezkhan@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
17	M.SandhyaM	sandhya.m@vit.ac.in	VIT Chennai
18	PRASANNAV	prasannv@srmist.edu.in	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY KATTANKULATHUR
19	X ARPUTHARATHINA	xarathina@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
20	NIYATI KUMARI BEHERA	niyati@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
21	Dr.D.MADHINABANU	madina@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
22	REVATHIS	srevathi@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
23	Dr.HEMAC	hemac@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
24	Dr. VALLIS.P	vallisp@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology

25	MuthupriyaV	muthupriya@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
26	Dr.Karthigallango	Karthiga.cse@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
27	Dr. DHANALAKSHMIB	dhanalakshmi@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
28	Dr. SharonPriya	sharonpriya@crescent.education	B.S Abdur Rahman Crescent Institute of Science & Technology
29	Dr. Saleena B	saleena.b@vit.ac.in	Vellore Institute Of Technology
30	Dr. B. Prakash		Vellore Institute Of Technology