



A Report on

Faculty Development Program on ‘Data Science and Docker Technology’

Organized by

**Department of Computer Science and Engineering, ACS College of Engineering (ACSCE),
Bangalore-560074, Karnataka**

Department of Computer Science and Engineering has organized 5 Day Faculty Development Program (FDP) on “Data Science and Docker Technology” from 29th June to 3rd July 2020. Dr .V Mareeswari in her speech addressed all the audience by her precious words. She started with the evolution of computer hardware and software. She continued to revise the change in technology and its importance. Later she discussed the needs of latest programming languages such as Python, R-programming etc. And the later session was continued by Mr. Namasivayam Chockalingom, Enterprise Application Analyst, Fiserv, who started the FDP with the basics of Data Science.

About the FDP:-

The vision of this FDP is to enhance the quality of education imparted in institutions by providing faculty members with a platform to learn all they need to know about Data Science and Docker Technology. Educators will get to learn the best practices in these domains so that they can teach the future workforce the required skill sets.

Data Science:- An interdisciplinary field, data science deals with processes and systems that are used to extract knowledge or insights from large amounts of data. Data extracted can be either structured or unstructured. Data science is a continuation of data analysis fields like data mining, statistics, predictive analysis. A vast field, data science uses a lot of theories and techniques that are a part of other fields like information science, mathematics, statics, chemometrics and

computer science. Some of the methods used in data science include probability models, machine learning, signal processing, data mining, statistical learning, database, data engineering, visualization, pattern recognition and learning, uncertainty modeling, computer programming among others. With advancements of so much of data, many aspects of data science are gaining immense importance, especially big data. Data science is not restricted to big data, which in itself is a big field because big data solutions are more focused on organizing and pre-processing the data rather than analyzing the data. In addition, machine learning has enhanced the growth and importance of data science in the last few years. Data has real value and every information extracted from it can make or break businesses. Analytics is the intersection of business and data science, offering new opportunities for a competitive advantage. It unlocks the predictive potential of data analysis to improve financial performance, strategic management, and operational efficiency. Data analytics can lead to valuable insights that can determine leads to increase sales, fraud detection, pattern recognition and risk prediction in various domains. As part of this initiative, a Faculty Development Programme (FDP) is conducted to focus on the fundamentals of data science with hands-on sessions on every topic handled using python.

Docker:- Docker is an open platform for developing, shipping, and running applications. Docker enables you to separate your applications from your infrastructure so you can deliver software quickly. With Docker, you can manage your infrastructure in the same ways you manage your applications. By taking advantage of Docker's methodologies for shipping, testing, and deploying code quickly, you can significantly reduce the delay between writing code and running it in production.

OBJECTIVES OF FDP:-

The principal purpose of Data Science is to find patterns within data. It uses various statistical techniques to analyze and draw insights from the data. From data extraction, wrangling and pre-processing, a Data Scientist must scrutinize the data thoroughly. And Docker is a set of platform as a service product that uses OS-level virtualization to deliver software in packages called containers. Containers are isolated from one another and bundle their own software, libraries and configuration files; they can communicate with each other through well defined channels.

Program Schedule:-

Day and Date	Course Contents
Day1: Monday, 29/6/2020	EMV tokenization, Data Science analyst
Day2: Tuesday, 30/6/2020	The Challenge: Matrix from hell
Day 3: Wednesday, 01/7/2020	Containers and Docker, Docker Installation, Docker Architecture, Docker Images, Containerizing an Application
Day 4: Friday, 02/7/2020	Docker Networking, Docker Compose, Case Study
Day 5: Saturday, 03/7/2020	Assignment Session


FDP Brochure:-

OUTCOMES:-
Upon successful completion of the FDP programme, participants would be able to not only contribute as a Data Science Team Member on big data and other Analytics projects but also take up research by: Deploying the Data Analytics Lifecycle to address big data Analytics projects. The most popular use case of Docker is service containerization. Today, most of the companies implement microservice architecture for their software products. For them it's much necessary to have a perfect isolation between services on dev, staging and production environments.

TOPICS TO BE COVERED:-


- EMV tokenization
- Data Science analyst
- The Challenge: Matrix from hell
- Containers and Docker
- Docker Installation
- Docker Architecture
- Docker Images
- Containerizing an Application
- Docker Networking
- Docker Compose
- Case Study

Registration Link: <https://forms.gle/U6tqU8uvvHzSexJi8>



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Quality Accreditation in our Institution



**Five days Online FDP on
Data Science and Docker Technology**

Date: 29th June to 3rd July 2020 Time: 11:00 am



in Association with



INSTITUTION'S INNOVATION COUNCIL
(A Body of VTU Belagavi)

Organized by

Department of Computer Science and Engineering

CHIEF PATRONS

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Dr. M.S.MURALI
Principal, ACSCE

Dr. V Mareeswari
HOD, Dept. of CSE

RESOURCE PERSONS



Mr. NAMASIVAYAM CHOCKALINGOM
Enterprise Application Analyst
Fiserv



Mr. Girish Y T
Programmer/Analyst
NetApp India (Pvt.) Ltd.

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ORGANIZING COMMITTEE

Faculty of Computer Science and Engineering Department

ABOUT THE INSTITUTE:-

ACS College of Engineering (ACSCE) , established in the year 2009 under Moogambigai Charitable and Educational trust is recognized by AICTE, New Delhi, Government of Karnataka and is affiliated to Visvesvaraya Technological University (VTU), Belgavi, Karnataka. The institute is accredited by NBA, NAAC, and HLACTION. The institute offers Seven UG courses in Computer Science and Engineering, Aeronautical Engineering, Aerospace Engineering, Bio medical Engineering, Civil Engineering, Electronics and Communication Engineering, Mechanical Engineering, PG courses and Research Centers. All the departments have well qualified staff and well equipped laboratories, library, computing and sports facilities along with other amenities. The college is located at a distance of 17 kms from Bangalore City Railway Station on Mysore road.

ABOUT THE DEPARTMENT:-

The department was established in the year 2009 with an intake of 120 students. It has well qualified and experienced Teaching and Supporting Staff. Our department is having total area of – 1994 sq meters. The department has spacious classrooms and a well-equipped computer labs with 185 systems, 2 servers all in a networked environment with un-interrupted power supply. Our Department is having smart class room, seminar Hall, Departmental Library, R&D, Language Lab. The institution offers Wi-Fi enabled high-speed Internet (60mbps) facility. The department is NBA accredited for 3 years (2016-2019) and got extension for another 3 years, NAAC accredited for 5 years with 'A' Grade (2016-2021).

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Day One

Cisco Webex Meetings

File Edit Share View Audio Participant Meeting Help

adamantnams

Participants (64)

- Lakshmi Priya P (Host, me)
- adamantnams
- A.Agnes Anto
- Admin08
- akshatha
- ANBARASU S
- Anubhav Kumar
- Aparna N
- ashoka
- BASTIN ROGERS C
- Chaya T D

Chat

+65-6703-6949 Singapore Toll
Access code: 156 144 4881
Global call-in numbers
from User to everyone: yes sir 11:10 AM

To: adamantnams

Enter chat message here

CD DV NN AA A

Chaya T D Dr Mareeswari V adamantnams Nagesha N A.Agnes Anto Admin08

Cisco Webex Meetings

File Edit Share View Audio Participant Meeting Help

adamantnams

Participants (76)

- Lakshmi Priya P (Host, me)
- adamantnams
- A.Agnes Anto
- A.Agnes Anto
- Admin08
- Admin1
- akshatha
- ANBARASU S
- Anubhav Kumar
- anuradhamit
- Aparna N

Chat

third party processors
from adamantnams to everyone: 11:23 AM
pos device --> merchant bank processor (acquirer processor) --> payment network (visa mastercard) --> issuing processor (cardholder bank processor)

To: adamantnams

Enter chat message here

SS R DV CD AA

Shilpa Shridhar rohanrajorja adamantnams Dr Mareeswari V Chaya T D A.Agnes Anto

Day Two

Cisco Webex Meetings

File Edit Share View Audio Participant Meeting Help

Participants (54)

- Lakshmi Priya P (Host, me)
- adamantnams
- A.Agnes Anto
- Admin08
- akshatha
- Ankitha Shetty
- Aparna N
- ashoka
- B BHASKARA RAO
- BASTIN ROGERS C
- KAI PANNA

Chat

I joined recently

from teena kb to everyone: 11:48 AM

no sir

from rohanrajoriya to everyone: 11:49 AM

OK Sir

To: Everyone

Enter chat message here

Day Three

Cisco Webex Meetings

File Edit Share View Audio Participant Meeting Help

Participants (22)

- Lakshmi Priya P (Host, me)
- Girish Thimmegowda
- A.Agnes Anto
- ACS
- Admin1
- Aparna N
- Compaq
- Dr.C.Punitha Devi
- irshad hassain
- Kaki Suresh
- kavvaarcse@gmail.com

Chat

Session will begin shortly

from seenu to everyone: 11:00 AM


good morning to all

from Dr.C.Punitha Devi to everyone: 11:03 AM

Good morning to all

To: Everyone

Enter chat message here

Introduction to  docker

Girish Thimmegowda

Cisco Webex Meetings

File Edit Share View Audio Participant Meeting Help

Participants (51)

Search

Lakshmi Priya P
Host, me

GT Girish Thimmegowda

AA A.Agnes Anto

A ACS

A Admin1

AS ANBARASU S

AK Anubhav kumar

A anuradhamit

AN Aparna N

A ashoka

DR hvactin rrmers

Chat

From Lakshmi Priya P to everyone: 10:56 AM
Good morning all!!!

From Lakshmi Priya P to everyone: 10:57 AM
Session will begin shortly

From seenu to everyone: 11:00 AM
good morning to all

From Dr.C.Purnima Dev to everyone: 11:03 AM

To: Everyone

Enter chat message here

VMs v/s Containers

- ▶ Runs own OS
- ▶ Heavyweight
- ▶ Startup Time in Minutes
- ▶ Limited Performance
- ▶ VM per microservice
- ▶ Shares Host OS
- ▶ Lightweight
- ▶ Startup Time in seconds
- ▶ High Performance
- ▶ Container per microservice

VM			CONTAINER		
App A	App B	App C	App A	App B	App C
Bins/Libs	Bins/Libs	Bins/Libs	Bins/Libs	Bins/Libs	Bins/Libs
Guest OS	Guest OS	Guest OS	Container Manager		
Hypervisor			Host OS		
Infrastructure			Infrastructure		

Day Four

Cisco Webex Meetings

File Edit Share View Audio Participant Meeting Help

Participants (51)

Search

Lakshmi Priya P
Host, me

GT Girish Thimmegowda

AA A.Agnes Anto

A Admin1

A akshatha

AS ANBARASU S

AK Anubhav Kumar

A anuradha

AN Aparna N

AK ashok Kumar

A ashoka

BC BASTIN ROGERS C

CD CHAYA T D

CD Chaya T D

CD chitharanjan das

C Compaq

Viewing Girish Thimmegowda...

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Day Five




The screenshot displays the Cisco Webex Meetings interface. At the top, the title bar reads "Cisco Webex Meetings" and includes standard window controls. Below the title bar is a menu bar with options: File, Edit, Share, View, Audio, Participant, Meeting, and Help. The main meeting area is currently empty, featuring a large, semi-transparent red letter "V" in the center. Above the "V" is a search bar containing the name "vinoth". To the right of the main area is a sidebar with two sections: "Participants (43)" and "Chat". The "Participants" list includes names such as chitharanjan das, Compaq, Dr. KDeepa Thilak, Dr. Kodhai. E, Fathima Shrene Shifna.N, Gayatri Joshi, Govind Raju R C, Gururaja H S, ISE-STAFF, Kaki Suresh, and Kanya Basvant. The "Chat" section shows a message from Lakshmi Priya P to everyone at 11:21 AM, stating "no mam" and "only assessment today and feedback link will be shared once you complete the assessment". At the bottom of the interface is a toolbar with icons for mute, video, screen share, chat, and other functions. Below the toolbar is a row of participant thumbnails, each with a name and a small video icon, including "Admin1", "santhosh kumar s", "RANJAN", "Admin1", "anoka", and "alukatha".

Participant's certificate



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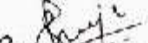
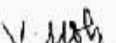



Department of Computer Science & Engineering

EXCLUSIVE VIRTUAL FACULTY DEVELOPMENT PROGRAM ON
“Data Science and Docker Technology”

Certificate

This is to certify that **Shilpa sridhar** of **Gopalan college of engineering** has actively participated in Five days virtual Faculty Development Programme on **DATA SCIENCE AND DOCKER TECHNOLOGY** held during 29th June - 03rd July 2020, organized by Department of Computer Science and Engineering, ACS College of Engineering, Bangalore.

 Mrs. Sunitha Chalageri Coordinator	 Mr. Prasad A Y Coordinator	 Mrs. Kavya G Coordinator	 Mrs. E. Christlin Shanuja Coordinator	 Dr. V. Maroeswari HOD, CSE	 Dr. M. S. Murali Principal
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