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Event proposal - AEI Division

Event type and name	"Robotics and Automation "
Tentative date	14th February 2023 - 18th February 2023
Participants/ audience	S4/S6/S8 AEI Students
Objectives	To prepare students to use modern tools and techniques in automation.
Resource requirements	Projector, Speaker, and Device with internet connectivity
Expected outcomes	Students will be able to provide solutions to real-world problems using GP8 Motoman robotic Arm.
Connected PEOs/POs/COs	PO1,PO2,PO3,PO4,PO5,PO12.
Resource persons	Srishti Robotics Technologies Pvt Ltd 1st floor, Anjikkath Tower, near Metro Piller 363, Edappally, Kochi, Kerala 682024
Responsible persons	Co-ordinators Mr. SHINU MM , AP AEI Ms.SHAMYA A, AP AEI Convenor Dr.G.Glan Devadas Professor & Vice Principal Vimal Jyothi Engineering College

Machine Vision and Artificial Intelligence in Robotics

Machine vision helps machines to see and understand the world around it through visual inputs. It is a multidisciplinary field that could broadly be called a subfield of artificial intelligence.

Our 5 days course on Machine Vision and AI helps to understand the core concepts of Machine Vision, Image Processing and AI using python.

Lesson Plan

DAY 1 : Python programming Fundamentals

- Variables, data types, conditions.
- Functional programming
- Python Exceptions Handling
- Graphical user interfaces.

DAY 2 : Getting started with Machine Vision

- Machine Vision Introduction
- OpenCV overview
- Different color spaces and conversion
- Different morphological processing operations

DAY 3 : Object Detection and Tracking

- Movement Detection
- Detecting coloured objects
- Contours
- Track and count coloured objects

DAY 4 : Artificial Intelligence

- Fundamentals of AI
- Advanced AI libraries for Vision
- Version control and source code management

DAY 5 : Capstone Projects

Assessment mechanism	
Day V	Presentation, demonstration, feedback
Budget details	
Remuneration for resource person	10000*3 = 30,000
Accommodation and Transportation	5000/-
Tea Snacks	40*20*3 = 2400 X
Lunch	2 *200*3 = 1200
Stationery	1000 ✓
Total expense	39,600/-

Proposal prepared by

Mr. SHINU MM , AP, AEI
Ms. SHAMYA A, AP AEI

Recommended by

Dr.G.Glan Devadhas
Professor & Vice Principal,(HOD)

[Signature]
23/01/23

[Signature]

[Signature]
18/11



**VIMAL JYOTHI
ENGINEERING COLLEGE**

JYOTHI NAGAR, CHEMPERI – 670632, KANNUR, KERALA
ACCREDITED BY IEI, NBA & NAAC • ISO 9001:2015 CERTIFIED
AFFILIATED TO KTU • APPROVED BY AICTE

**DEPARTMENT OF
ELECTRONICS & INSTRUMENTATION ENGINEERING**

ADD-ON COURSE

On

**Machine Vision and Artificial
Intelligence in Robotics**

Venue: Research lab AEI

Date: 28/02/2023 to 04/03/2023

COURSE CODE: ADEI401

Course duration: 5 days (30 hours)

In association with

Srishti Robotics Technologies Pvt Ltd

FOR

**Final Year Applied Electronics and Instrumentation Engineering
Students**

Convener: Dr. G. Glan Devadhas, HOD AEI

Staff Coordinators: Mrs. Jinsa Mathew, Mr. Shinu MM

Assistant Professor, AEI

Vision

The department strives to enrich professionals of high competency in the area of instrumentation engineering and mould them to adopt the crux of matter in the field of automation.

Mission

To prepare the students to envisage beyond the hypothetical thinking and belong to a new era of acquisition and application of instrumentation technology to meet the requisition of the changing world.



**INNOVATION AND
ENTREPRENEURSHIP
DEVELOPMENT CENTRE**



**INSTITUTION'S
INNOVATION
COUNCIL**
(Ministry of Education Initiative)

VIMAL JYOTHI ENGINEERING COLLEGE CHEMPERI
DEPARTMENT OF ELECTRONICS & INSTRUMENTATION
ENGINEERING

ADD-ON COURSE ON MACHINE VISION & ARTIFICIAL
INTELLIGENCE IN ROBOTICS

Duration: 28.02.2023 to 04.03.2023

Department of electronics & instrumentation successfully conducted an Add-on course on Machine Vision and Artificial Intelligence in Robotics in association with Srishti Robotics Technologies Pvt Ltd, from 28th February 2023 to 4th March 2023.. The program was organized for Final Year Applied Electronics and Instrumentation Engineering Students.

The Program was Inaugurated by Dr. G Glan Devadhas, Vice Principal, HOD EIE on 28th February 2022. Final year students and all faculties of the department were present in the inauguration function. Mr. Shinu M M, AP EIE delivered the welcome address and Ms. Jinsa Mathew, AP EIE, delivered the vote of thanks.

Vimal Jyothi Engineering College, Kerala, Signed MoU with Srishti Robotics Technologies Pvt Ltd. for development of Engineering Students.

The Program was scheduled for 5 days, with the following lesson plan.

28.2.2023

DAY 1 : Python programming Fundamentals

- Variables, data types, conditions.
- Functional programming
- Python Exceptions Handling
- Graphical user interfaces.

01.03.2023

DAY 2 : Getting started with Machine Vision

- Machine Vision Introduction
- OpenCV overview
- Different color spaces and conversion
- Different morphological processing operations

02.03.2023

DAY 3 : Object Detection and Tracking

- Movement Detection
- Detecting coloured objects
- Contours
- Track and count coloured objects

03.03.2023

DAY 4 : Artificial Intelligence

- Fundamentals of AI
- Advanced AI libraries for Vision
- Version control and source code management

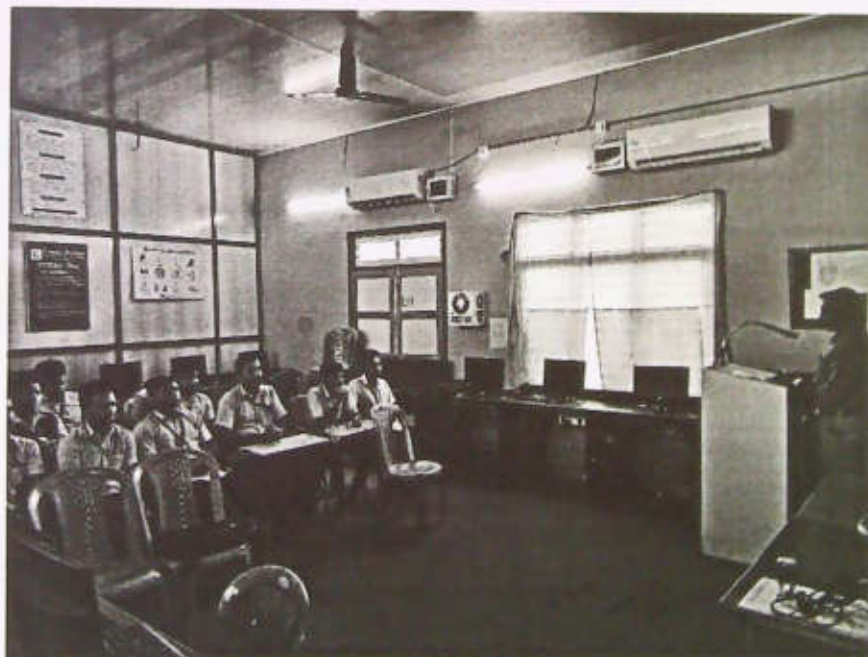
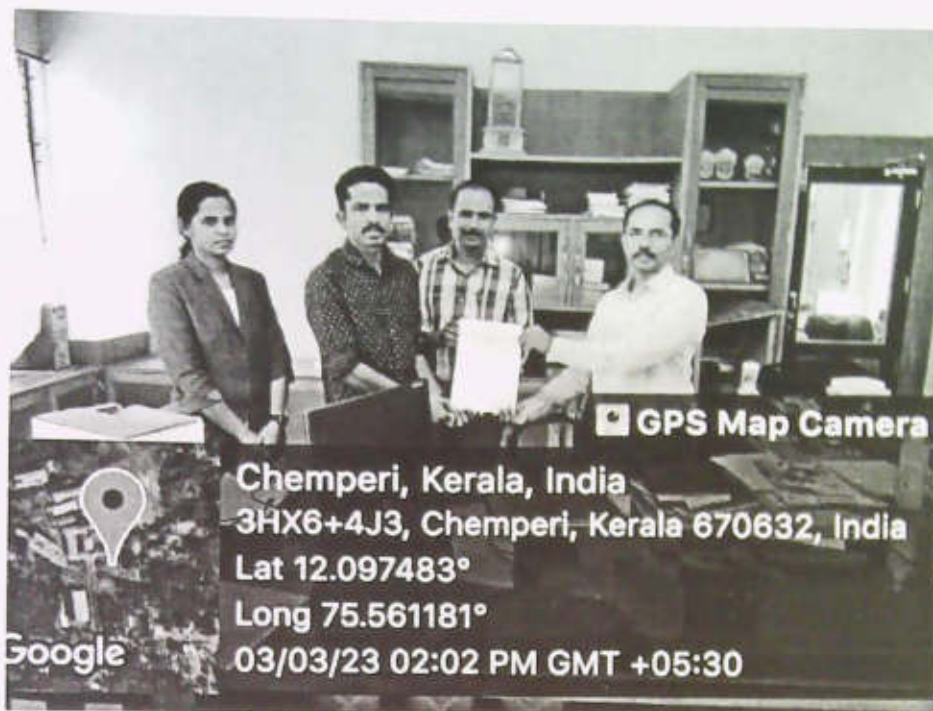
04.03.2023

DAY 5 : Capstone Projects

Coordinator:

Mr. Shinu M M, AP EIE & Ms. Jinsa Mathew, AP EIE.

Photographs







Model Certificate



Certificate of Completion

This is to certify that Mr/Ms ADWAITH PRADEEP has successfully completed the MACHINE VISION AND ARTIFICIAL INTELLIGENCE IN ROBOTICS training program conducted by Srishti Robotics Technologies Pvt. Ltd. From 28-02-2023 to 04-03-2023

Key Modules Covered are,

- ⊗ Python Fundamentals
- ⊗ Image Processing
- ⊗ Machine Vision with OpenCV and Python
- ⊗ Advanced artificial intelligence libraries

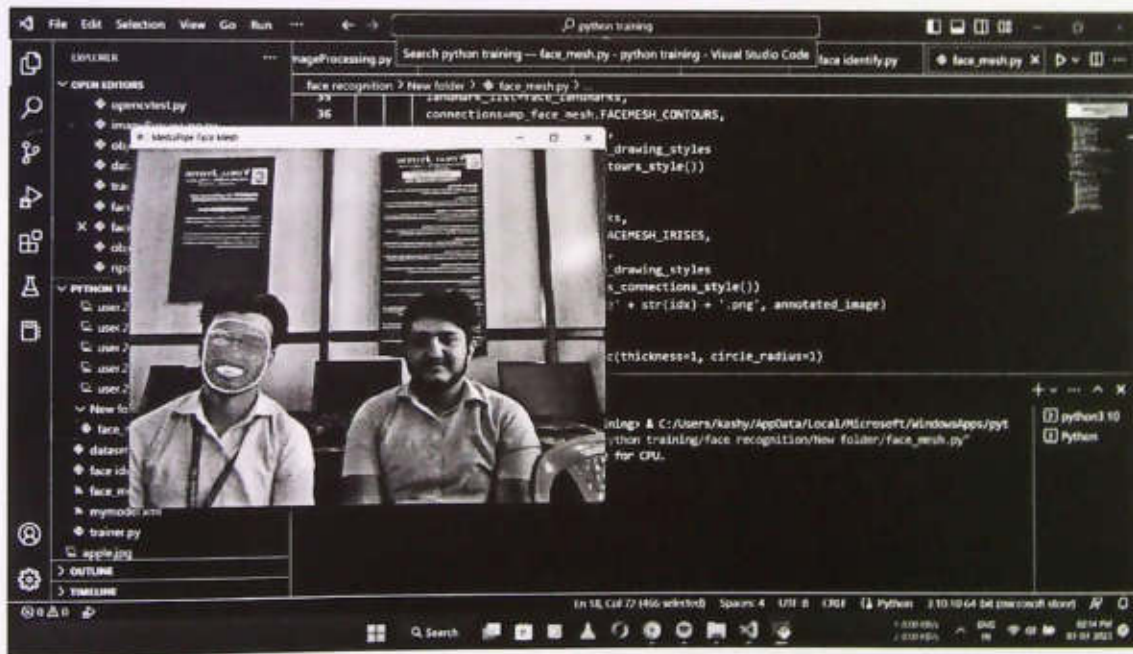

Jithin C V
Senior Curriculum Designer

SRISHTI-AC-23/001

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Assessment procedures

1. In the fifth day of the Add-on course, Group Vice Projects are created and evaluated. The projects lists are
 - a. Face detection using python
 - b. Object detection using python
 - c. Video capturing using python
 - d. Pattern creation



DEPARTMENT OF ELECTRONICS & INSTRUMENTATION ENGINEERING
ADD ON COURSE - MACHINE VISION & ARTIFICIAL INTELLIGENCE IN ROBOTICS
ATTENDANCE SHEET

Sl. No.	Name of Student	28.02.2023		01.03.2023		02.03.2023		03.03.2023		04.03.2023	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	Dileep C	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
2	Adwait Pradeep	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
3	Aljo John	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
4	Anamika C	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
5	Anjo Mathew	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
6	Anusree K	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
7	Aswin J Prasad	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
8	Aswin Thomas	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
9	Devaprakash	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
10	Ibin P B	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
11	Joyel Joseph	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
12	Justin George	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
13	Kashyap K	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
14	Mohammed Raheel	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
15	Nashia K P	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
16	Paulson Edwin Kunnath Parambil	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
17	Prabin Baby	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
18	Salvin Jose K	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
19	Sreehari T V	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
20	Veda K C	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>



Vipin Mathew

Technical Trainer

CONTACT

Address
 Thannickal (H)
 Chemperi (P.O) , Kannur, Kerala
 India Pin : 670632

Phone
 +91 9605495608

Mail: vipin007mathew@gmail.com

EDUCATION

2009-2013

KANNUR UNIVERSITY
 Electronics and Communications
 Engineering

TECHNICAL EXPERTISE

- Python
- Arduino
- MIT app inventor
- Raspberry Pi, Esp8266
- OpenCV, Numpy, Pandas
- Tensorflow
- Django
- Firebase
- Robot Operating system

PROFILE

Engaging , understanding and knowledgeable technical trainer with over 8 years of experience educating school and college students in different domains.

EXPERIENCE

2014-Present

Srishti Robotics

SENIOR TECHNICAL TRAINER

- Post K12:**
- Conduct classroom training session, workshops , webinars , and Q & A sessions for b-tech students and graduates
 - Support for academic project development in the following
 - Machine Vision
 - Machine Learning
 - Robot Operating System
 - Internet of Things
 - Embedded systems
 - Web development with Django
 - Conducted hands on training for more than 40 colleges in machine vision, robotics and internet of things
 - Offline training : More than 8000 students
 - Python Online training : More than 1000 students

- K12:**
- Conducted hands on training for more than 30 schools in robotics and basic electronics
 - Offline training : More than 7000 students
 - Python one to one Online training : More than 1000 students
 - Robotics one to one Online training :More than 500 students
 - Support students for robotics and other coding competitions.
 - Coordinated Roborave India in 2016 and 2017

2013 - 2014

Sayone Technologies

PYTHON DEVELOPER

Project : Curbside - Web Scrapy
 Curbside is an android and ios app that helps customers to connect with stores. I worked as a web crawler for collecting product information from Retailer websites.



Srishti Robotics Technologies Pvt Ltd

3rd Floor, Aarcee Square
SA Road, Kadavanthra
Kochi Kerala 682020
7902224040
GSTIN 32AAACS3119C1Z0

TAX INVOICE

Invoice#	: SRT-EKM-22-031	Place Of Supply	: Kerala (32)
Invoice Date	: 13/03/2023		
Terms	: Due on Receipt		
Due Date	: 13/03/2023		

Bill To
Vimal Jyothi Engineering College
 State Highway 59, Jyothi Nagar, Chempur
 Kannur
 670632 Kerala
 India

#	Item & Description	HSN/SAC	Qty	Price	Amount	GST	GST	Total
1	ROBOTICS TRAINING 5 Days Machine Vision and AI	999293	1	25,424.00	25,424.00	9%	9%	30,000.32
Sub Total					₹25,424.00	2,288.16	2,288.16	₹30,000.32

Total in Words
 Rupees Thirty Thousand Only

Thanks for your business.
 Bank Details
 Account Number: 35937614189
 Branch: State Bank of India, Palarivattom
 IFSC: SBIN004312
 PAN: AAACS3119C



[Handwritten Signature]
 Authorized Signature

Terms & Conditions
 E & O E
 1. Goods once sold will not taken back
 2. Subjected to ERNAKULAM jurisdiction only

Timestamp	Email Address	Name of Student:	Email id:	1. Was the Course technically helpful to you?	2. How would you rate the relevance of the Course with the curriculum ?
3-7-2023 14:21:40	joyeljoy85@gmail.com	Joyel Joseph	joyeljoy85@gmail.com	Very Good	Very Good
3-7-2023 14:21:53	kashyapsathyank@gmail.com	Kashyap K	kashyapsathyank@gmail.com	Very Good	Very Good
3-7-2023 14:22:19	sreeharibalat@gmail.com	Sreehari T V	sreeharibalat@gmail.com	Very Good	Very Good
3-7-2023 14:22:32	anamikagovar@gmail.com	Anamika C	anamikagovar@gmail.com	Very Good	Very Good
3-7-2023 14:22:55	jibinpbinu@gmail.com	Jibin P B	jibinpbinu@gmail.com	Very Good	Very Good
3-7-2023 14:22:56	anusreemanoj100@gmail.com	Anusree K	anusreemanoj100@gmail.com	Very Good	Very Good
3-7-2023 14:23:23	adwaithappu1726@gmail.com	Adwaith Pradeep	adwaithappu1726@gmail.com	Very Good	Very Good
3-7-2023 14:37:38	dileepsreenilayams@gmail.com	DILEEP C	dileepsreenilayams@gmail.com	Very Good	Very Good
3-7-2023 14:38:29	mohammedraheel22@gmail.com	Mohammed Raheel	mohammedraheel22@gmail.com	Very Good	Good
3-7-2023 15:17:19	aljojohn1018@gmail.com	Aljo John	aljojohn1018@gmail.com	Very Good	Good
3-7-2023 15:17:30	anjomathew916@gmail.com	Anjo Mathew	anjomathew916@gmail.com	Very Good	Very Good
3-7-2023 15:46:58	nashlakp098@gmail.com	Nashla kp	nashlakp098@gmail.com	Very Good	Good
3-7-2023 16:07:23	veda090202@gmail.com	Veda KC	veda090202@gmail.com	Very Good	Very Good
3-15-2023 12:32:20	paulson.edwin@gmail.com	Paulson Edwin	paulson.edwin@gmail.com	Very Good	Very Good
3-15-2023 12:33:46	aswinthomas017@gmail.com	Aswin Thomas	aswinthomas017@gmail.com	Very Good	Very Good
3-15-2023 12:35:21	aswin.j.prasad@gmail.com	Aswin J Prasad	aswin.j.prasad@gmail.com	Very Good	Very Good
3-15-2023 12:36:08	prabinbaby5@gmail.com	Prabin Baby	prabinbaby5@gmail.com	Very Good	Very Good

3. How would you rate the Resource Person ?	4. Whether the Resource Person were able to clarify your doubts?	5. Do you prefer to have this kind of Course in the future?	6. Give overall rating to the Course	7. How organized was this event?	8. How helpful was the event?	9. Do you prefer ?
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	1 week workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	10 days workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	1 week workshop
Very Good	Very Good	Yes	Very Good	Well organized	Very Helpful	10 days workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	10 days workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	5 day workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	1 week workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	10 days workshop
Very Good	Very Good	Yes	Very Good	Well organized	Very Helpful	10 days workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	5 day workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Very Helpful	5 day workshop
Very Good	Very Good	Yes	Very Good	Well organized	Very Helpful	1 week workshop
Very Good	Very Good	Yes	Very Good	Well organized	Very Helpful	1 week workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	5 day workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	10 days workshop
Very Good	Very Good	Yes	Very Good	Extremely Organized	Extremely Helpful	10 days workshop
Good	Good	Yes	Good	Well organized	Very Helpful	5 day workshop

