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MANIAMMAI**
INSTITUTE OF SCIENCE & TECHNOLOGY
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PROGRAMME REPORT ON

Short Term Training Programme (STTP)-Data Engineering

Resource Person

**Dr. NAGARAJU BAYDEIT Assistant Professor Computer Science
and Engineering NIT - Nagaland**

Organized by

INFORMATICS- PMIST



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Periyar Nagar, Vallam, Thanjavur - 613 403
Tamil Nadu, India. | www.pmu.edu

DEPARTMENT OF INFORMATICS

Faculty of Computing Science and Applications (FCSA)

EVENT REPORT

1.	Event Category (Seminar / FDP / STTP / Workshop / Conference /...)	Short Term Training Programme (STTP)
2.	Title of the Programme	“Data Engineering”
3.	Period: • Date (From ___ to ___) • Time	<ul style="list-style-type: none"> • 20 - 24, January 2025 • 9.00 AM to 4.00 PM
4.	Beneficiaries: • In-house / Others / Both • Students / Faculty / Staff	<ul style="list-style-type: none"> • In-house • Students
5.	NAAC / NBA / NIRF/ Others	NAAC Criteria 5.3.1: 1 - Soft Skills NAAC Criteria 5.3.1: 4 - Awareness of Trends in Technology
6.	Associated SDG(s)	4, 8, 9, and 11
7.	Mode: • Offline / Online • Venue / Online Platform	<ul style="list-style-type: none"> • Offline • New Lab- 2 (PKC 512)
8.	Coordinator(s) / Co-Coordinator(s)	Convener & Coordinator(s): Dr. A. Muthamizh Selvan Head and Associate Professor Department of Informatics Co-Coordinator(s): Dr. V. RAJKUMAR, Asst. Prof.(SG) Dr. M. MANIKANDAN, Asst. Prof. Department of Informatics
9.	Resource Person(s)	Dr. NAGARAJU BAYDEIT Assistant Professor Computer Science and Engineering NIT - Nagaland
10.	Number participants	<ul style="list-style-type: none"> • Female Students : 25 • Male Students : 32 • Total : 52

STTP on “DATA ENGINEERING”

The Department of Informatics organized a five-day training programme titled “Data Engineering” from January 20-24, 2025 as an event of VISTA (Visionaries on Informatics in Science, Technology, and Analytics), the association of the Department of Informatics, aimed at equipping students with essential skills in data transformation, data analytics and visualization using Python. The training fostered practical knowledge and enhanced problem-solving abilities in real-world data science scenarios. The inaugural session featured a motivational address by the Vice-Chancellor, Prof. Dr. V. Ramachandran, who emphasized the relevance of Python in current technological trends and appreciated the expertise of the resource person.

Dr. Rengaraju Baydeti, Assistant Professor, Department of Computer Science and Engineering, NIT, Nagaland conducted all five days of training with an engaging approach that combined theoretical concepts with practical exercises. The training sessions were designed to equip students with essential skills in Python programming, data analytics and data visualization. The sessions were interactive, combining theory and practice, enabling participants to gain an experience with Python tools and techniques for data science applications.

This initiative aligns with the United Nations Sustainable Development Goals (SDGs), particularly SDG 4: Quality Education and SDG 8: Decent Work and Economic Growth, by fostering skill development and enhancing employability. The programme was co-ordinated by Dr. A. Muthamizh Selvan, Head and Associate Professor and co-coordinated by Dr. V. Rajkumar, Assistant Professor (SG), with Dr. M Manikandan, Assistant Professor, and all faculty and staff from the Department of Informatics.

Objectives

1. To introduce students to Python programming and its applications in data science.
2. To provide practical exposure to data analytics and data visualization techniques.
3. To enhance skills in preparing datasets, building models, evaluating machine learning performance and produce data visualization.
4. To prepare students for academic projects, internships, and future careers in data science.

Activities Conducted



1. Lectures and training by Dr. Nagaraju Baydeit on data science fundamentals.
2. Practical exercises on data engineering task using Python.
3. Sessions on data handling the missing values, data cleaning and data transformation with Python.
4. Building and evaluating the CSV file handling using Python libraries.
5. Dataset preparation and transformation to perform Regression models in classification.
6. Exercises on data visualization techniques and performance evaluation of machine learning algorithms.
7. Prepare different type of plots visualization by using Python libraries.

Outcomes

1. Students gained a comprehensive understanding of Python for data analytics and machine learning.
2. Acquired practical knowledge of building and evaluating data handling process.
3. Improved skills in dataset preparation, transformation, and visualization for data science applications.
4. Enhanced ability to optimize code for efficient programming using Python techniques.
5. Developed readiness for academic projects, internships, and employment in data science and analytics.
6. Strengthened problem-solving and critical thinking capabilities through training.
7. Contributed to achieving SDG 4: Quality Education by offering accessible, high-quality training, and SDG 8: Decent Work and Economic Growth by equipping students with skills for the digital economy.



EVENT BROCHURE



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DEPARTMENT OF INFORMATICS

DATA ENGINEERING

5 DAYS
SHORT-TERM TRAINING PROGRAMME

Resource Person

Dr. Nagaraju Baydeti

Assistant Professor
Computer Science and Engineering
NIT - Nagaland



Convener & Coordinator

Dr. A. Muthamizh Selvan

Associate Professor & Head
Dept. of Informatics

20 – 24, JANUARY 2025

9.00 AM - 4.00 PM

Charles Babbage Hall (PKC 204)

Co-Coordinators:

Dr. V. Rajkumar
Assistant Professor (SG)
Dept. of Informatics

Dr. M. Manikandan
Assistant Professor
Dept. of Informatics



An event of VISTA (Association of Department of Informatics)

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EVENT SCHEDULE



DEPARTMENT OF INFORMATICS

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Data Engineering

20-01-2025 - 24-01-2025 (5-days)

09.30 am - 04.00 pm @ New Lab - 2 (PKC 512)

PROGRAM SCHEDULE

Day 1: 20-01-2025(Monday)

- 09.00 am - Welcome address : **Ms. ARCHANA**
II Year B.Sc. Data Science
- 09.10 am - Guest Introduction : **Dr. A. MUTHAMIZH SELVAN**
Head & Associate Professor in Informatics.
- 09.25 am - Felicitation Address : **Prof. Dr. V. RAMACHANDRAN**
Vice chancellor, PMIST.
- 09.45 am - Keynote Address : **Dr. NAGARAJU BAYDEIT,**
Assistant Professor,
Department of Computer Science and
Engineering, NIT, Nagaland.
- 10.30 am - Tea Break
- 11.00 am - Session I : **Overview of Data Engineering,**
- 01.15 pm - Lunch Break
- 02.00 pm - Session II : **Reading Data from various files.**

Day 2: 21-01-2025(Tuesday)

- 09.00 am - Session III : **Data Collection and importing data**
- 11.00 am - Tea Break
- 11.30 am - Session IV : **Handling Missing Values**
- 01.15 pm - Lunch Break
- 02.15 pm - Session V : **Hands-on Exercise**

Day 3: 22-01-2025(Wednesday)

- 09.00 am - Session VI : **Data Preprocessing Essentials**
- 11.00 am - Tea Break
- 11.30 am - Session VII : **Data- Cleaning Techniques**
- 01.15 pm - Lunch Break
- 02.00 pm - Session V : **Hands-on Exercise**

Day 4: 23-01-2025(Thursday)

09.00 am - Session IX : **Introduction to Supervised Learning**
11.00 am - Tea Break
11.30 am - Session X : **Building Classification Models**
01.15 pm - Lunch Break
02.00 pm - Session XI : **Building Regression Models**

Day 5: 24-01-2025(Friday)

09.00 am - Session XII : **Introduction to Data Visualization**
11.00 am - Tea Break
11.30 am - Session XIII : **Advanced Visualization**
01.15 pm - Lunch Break
02.00 pm - Session XIV : **Final Project and Hands-on Exercise**
04.00 pm - Vote of Thanks : **Ms. R. ELAKKIYA**
I Year M.Sc. Data Science



PARTICIPANTS ATTENDANCE

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**PERIYAR
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INSTITUTE OF SCIENCE & TECHNOLOGY

DATA ENGINEERING (1st M.Sc.)

S.No	Name of the Student	20-01-2025	21-01-2025	22-01-2025	23-01-2025	24-01-2025
1	S. JANANI	S. Janani	AAA	S. Janani	S. Janani	S. Janani
2	ELAKKIYA R	P. Elakkiya R	AAA	P. Elakkiya R	P. Elakkiya R	P. Elakkiya R
3	KAYALVIZHI.G	G. Kayalvizhi	G. Kayalvizhi	G. Kayalvizhi	G. Kayalvizhi	G. Kayalvizhi
4	OVIYA S	S. Oviya	S. Oviya	S. Oviya	S. Oviya	S. Oviya
5	YOGESWARAN.R	R. Yogeswaran	R. Yogeswaran	R. Yogeswaran	R. Yogeswaran	R. Yogeswaran
6	SUBHASHINI V	V. Subhashini	V. Subhashini	V. Subhashini	V. Subhashini	V. Subhashini
7	ATCHAYA.P	P. Atchaya	P. Atchaya	P. Atchaya	P. Atchaya	P. Atchaya
8	HARINI.S	S. Harini	S. Harini	S. Harini	S. Harini	S. Harini
9	SWATHI S	S. Swathi	S. Swathi	S. Swathi	S. Swathi	S. Swathi
10	RENGARAJAN M	M. Rengarajan	M. Rengarajan	M. Rengarajan	M. Rengarajan	M. Rengarajan
11	LOKESWARI L	L. Lokeswari	L. Lokeswari	L. Lokeswari	L. Lokeswari	L. Lokeswari
12	YAZHINI N	N. Yazhini	N. Yazhini	N. Yazhini	N. Yazhini	N. Yazhini
13	ARUN	S. Arun	S. Arun	S. Arun	S. Arun	S. Arun
14	KARANESWERAN G	G. Karanesweran	G. Karanesweran	G. Karanesweran	G. Karanesweran	G. Karanesweran
15	PRIYANKA M	M. Priyanka	M. Priyanka	M. Priyanka	M. Priyanka	M. Priyanka
16	MUTHUKRISHNAN D	D. Muthukrishnan	D. Muthukrishnan	D. Muthukrishnan	D. Muthukrishnan	D. Muthukrishnan
17	SIVAKUMAR S	S. Sivakumar	AAA	AAA	S. Sivakumar	S. Sivakumar
18	SANJAY S	S. Sanjay	S. Sanjay	S. Sanjay	S. Sanjay	S. Sanjay
19	KARTHIKEYAN R	R. Karthikeyan	R. Karthikeyan	R. Karthikeyan	R. Karthikeyan	R. Karthikeyan
20	ABINAYA S	S. Abinaya	S. Abinaya	S. Abinaya	S. Abinaya	S. Abinaya

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VALLAM, THANJAVUR
TAMIL NADU - 613 403
ESTD - 1983

DATA ENGINEERING (3rd B.Sc.)

S.No	Name of the Student	20-01-2025	21-01-2025	22-01-2025	23-01-2025	24-01-2025
1	AKALYA S	AKJ AKJ	AKJ AKJ	AKJ AKJ	AKJ AKJ	AKJ AKJ
2	S.ABINAYA	SAB SAB	SAB SAB	SAB SAB	SAB SAB	SAB SAB
3	FADHILA SHAHIN F	FAD FAD	FAD FAD	FAD FAD	FAD FAD	FAD FAD
4	FIRTHOWS B	FIR FIR	FIR FIR	FIR FIR	FIR FIR	FIR FIR
5	KISHORE KUMAR R	AAA AAA	R.KK R.KK	R.KK R.KK	R.KK R.KK	R.KK R.KK
6	MOHAMED SUHAIL	M M	M M	M M	M M	M M
7	DHANUSU ARUNACHALAM P	PAB PAB	PAB PAB	PAB PAB	PAB PAB	PAB PAB
8	RAKESH G	G.R G.R	G.R G.R	G.R G.R	G.R G.R	AAA AAA
9	VISHAL E	V V	V V	V V	V V	V V
10	RAJA K	K.R K.R	K.R K.R	K.R K.R	K.R K.R	K.R K.R
11	ADIL AHAMED M	M.A M.A	M.A M.A	M.A M.A	M.A M.A	M.A M.A
12	MOHAMED RAAMI B	R R	R R	R R	R R	R R
13	UMAR NISHA U	U.N U.N	U.N U.N	U.N U.N	U.N U.N	U.N U.N
14	MOHAMED IRFAN S	I I	I I	I I	I I	I I
15	MOHAMED ANAS	A A	A A	A A	A A	A A
16	MOHAMED ASADH J	A A	A A	A A	A A	A A
17	S SHAKTHIVEL	S S	S S	S S	S S	S S
18	MOHAMED SALMAN FARSHI K	F F	F F	F F	F F	F F
19	HARI KRISHNAN	H H	H H	H H	H H	H H
20	V. SATHIYA	V.S V.S	V.S V.S	V.S V.S	V.S V.S	V.S V.S

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21	MOHAMED SALMAN PARIS M	Handwritten	Handwritten	AAA	Handwritten	Handwritten
22	KISHORE M	H.V M.K	M.V M.K	M.K	M.V AAA	M.V M.K
23	YAZHLENIYAN	AAA AAA	Handwritten	Handwritten	Handwritten	Handwritten
24	JEEVA P	P.S P.S	P.S P.S	P.S	P.S	P.S
25	NAVANEETHAN K	Handwritten	Handwritten	Handwritten	Handwritten	Handwritten
26	N. GANESH KUMAR	N.G.K	N.G.K	N.G.K	N.G.K	N.G.K
27	S. BOJARAJAN	S.Bojarajan	S.Bojarajan	S.Bojarajan	S.Bojarajan	S.Bojarajan
28	R. SUJITH	R.S	R.S	R.S	R.S	R.S
29	V. KAVIN	AAA AAA	V.K	V.K	V.K	V.K
30	C. NANTHAKUMAR	Nantha	Nantha	Nantha	Nantha	Nantha
31	M. SHAKTHI	Shakthi	Shakthi	Shakthi	Shakthi	Shakthi
32	B. SHALINI	B. Shalini	B. Shalini	B. Shalini	B. Shalini	B. Shalini
33	v. Basangu Raj	v.B	v.B	AAA	v.B	v.B
		v.B	v.B	AAA	v.B	v.B

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EVENT FOOTAGES



Day 1: 20-01-2025



Day 1: 20-01-2025



Day 1: 20-01-2025



Day 1: 20-01-2025



Day 2: 21-01-2025



Day 2: 21-01-2025

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Day 3: 22-01-2025



Day 3: 22-01-2025



Day 4: 23-01-2025



Day 4: 23-01-2025



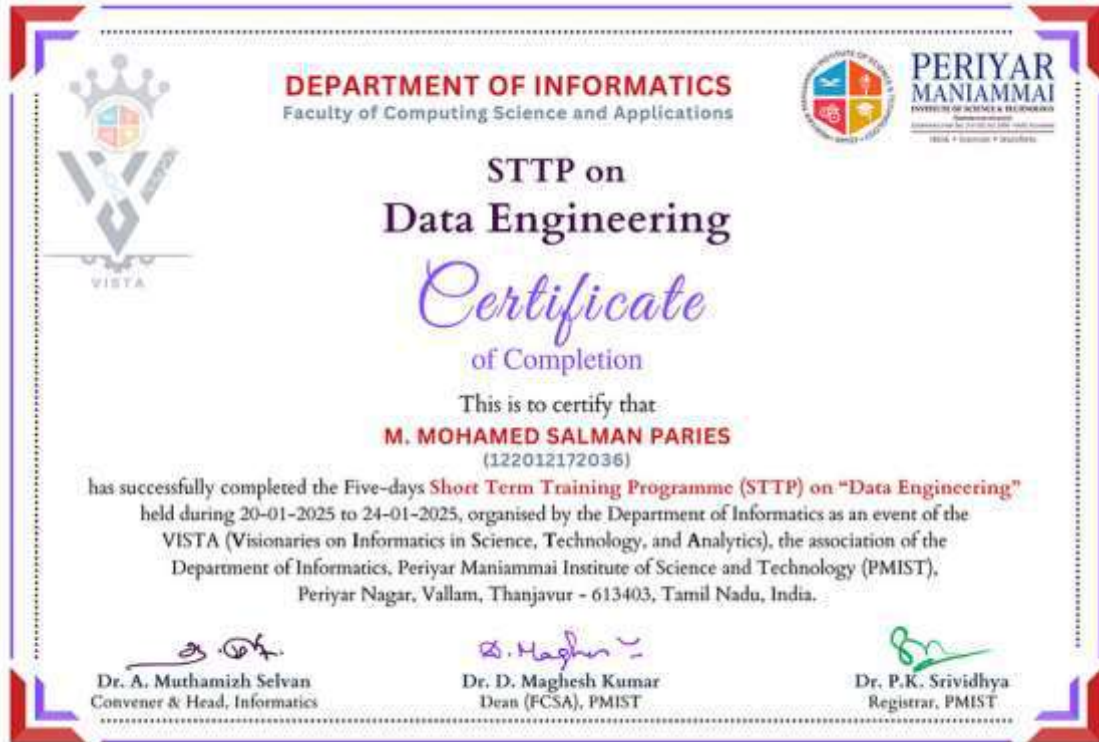
Day 5: 24-01-2025



Day 5: 24-01-2025

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SAMPLE CERTIFICATE




Co-coordinator
Dr. V. RAJKUMAR


Co-coordinator
Dr. M. MANIKANDAN


Coordinator and Head
Dr. A. MUTHAMIZH SELVAN

Head of the Department
Department of Informatics
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