

**ISTE approved – ONE Week Online STTP on
APPLIED STATISTICS AND SOFTWARE TOOLS
FOR DATA SCIENCE**

Organized and conducted by

**Department of Computer Engineering,
Thadomal Shahani Engineering College**

Date: 3rd July 2023 to 8th July 2023

Convener: Dr. G. T. Thampi

Co-convener: Dr. Tanuja Sarode

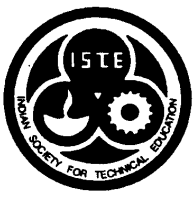
Coordinators: 1. Mr. Vaibhav Ambhire

2. Ms. Sonali Jadhav



**Dr. G. T. Thampi
PRINCIPAL**
Thadomal Shahani Engineering College
Bandra (W), Mumbai - 400 050.





भारतीय तकनीकी शिक्षा संस्था

INDIAN SOCIETY FOR TECHNICAL EDUCATION

(Under the Societies' Registration Act XXI of 1860)

Prof. Vaidya Vijay Dattatray

Executive Secretary

ISTE/Proceedings/Online STTP-SF-MAH-028/2023-24

May 25, 2023

Proceedings of Executive Secretary, ISTE

Sub. : Sanction to conduct full time Short-term Training Programme on Self-financing basis for the financial year 2023-2024.

Sanction is hereby accorded to the following institution for the conduct of the Online/SF-STTP/FDP programme indicated below:

Name of Institution	:	Thadomal Shahani Engineering College Mumbai – 400 050
Topic	:	Applied Statistics & Software Tools for Data Science
Name & Address of Coordinators	:	Mrs. Sonali Jadhav Mr. Vaibhav Ambhire Asst. Prof. Asst. Prof.
Duration	:	One Week (Minimum 05 Working Days)
Proposed dates	:	03-07-2023 to 08-07-2023


Terms and Conditions

The institution offering the Programmes should be approved by AICTE and must be Institutional Member of ISTE. Institutions having ISTE Faculty Chapter and Students Chapter shall be preferred. There will be no financial commitment on the part of ISTE on account of this programme. The fee of one **proposal is Rs. 1180/- (Incl. 18% GST)** paid by DD in favour of ISTE New Delhi along with proposal or by NEFT/RTGS in the following ISTE Account **(Name of Account: ISTE Membership Fee, Account No: 6707247614 Bank: Indian Bank IFSC Code: IDIB000M089 Branch: Mehrauli Road New Delhi).**

- 1 This will be a online program of the duration of 1 week/2 weeks/4 weeks.
- 2 The registration fee of the participants may be fixed by the host institution.
- 3 ISTE Life membership is necessary for participants to attend SF programmes. However, If any participant is not having life membership he/she may take the membership of ISTE before the starting of the course and apply by paying the fee to the course coordinator at the spot before the commencement of the programme. The Life Membership fee is Rs. 3540/- (Incl. 18% GST) to be paid by DD in favour of ISTE New Delhi or by NEFT/RTGS as per above Account details.

--/2

Shaheed Jeet Singh Marg, Near Katwaria Saria, New Dehli – 110 016
Phone: 91-11 26513542, 26963431, 26514234, Fax: 91-11 26852421, E mail: istedhq@isteonline.org Website: www.isteonline.in


Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai -400 050.



- 4 The final report as mentioned in these guidelines is to be submitted online to ISTE within 15 days after completion of the Programme.
- 5 The institute should ensure that the Resource Persons should be well known personalities having thorough knowledge and he/she should be from an Institute or Industry.
- 6 **Since it is an Online program, e-Certificate to ISTE Life Members will be issued by ISTE from this office. Operational and processing fee of Rs. 100 +18% GST (Total Rs. 118/-) will be charged per participant. Institute conducting the program will collect the fee from participants and will send it to ISTE by DD or NEFT/RTGS with list of participants with their ISTE Life Membership Number. Institute conducting on line program will not issue Certificates with ISTE logo to Participants. Course coordinator is requested to ensure the same and attach payment proof or UTR number.**
- 7 **At least one test at the end is to be conducted to judge the performance of participants. Institute can conduct more test, if they desire. Attendance and successful completion of Test conducted is mandatory to receive certification by ISTE. Co Ordinator should ensure this while submitting list of participants to ISTE.**
- 8 **The Digital e-certificates to eligible participants will be sent by ISTE Delhi through organizing Institute.** The certificate contains the ISTE logo at the top. The digitally signed e-certificates will bear the Signatures of Executive Secretary, ISTE.
- 9 Above terms and conditions are applicable to Online Programs only.



Executive Secretary

To,

Dr. G.T. Thampi
Principal
Thadomal Shahani Engineering College
Nari Gurshani Marg, Off. Linking Road
TPS III, Bandra (W), Mumbai – 400 050
Maharashtra State

Copy to:

Mr. Vaibhav Ambhire
Coordinator
Thadomal Shahani Engineering College
Nari Gurshani Marg, Off. Linking Road
TPS III, Bandra (W), Mumbai – 400 050
Maharashtra State



Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
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Guidelines to be followed for Online Programme

Immediately after approval from ISTE

- Link of FDP program brochure or template.
- Link of registration for faculties.
- Details of the program, day-wise
- List of Resource persons
- Topic and the outcome expected post the event

Before one of the session:-

- Response sheet of participants received for considering total number of participant.

From Day 1 to till end every day before and after session (day)

- Link of invitation of every session with password for joining.
- Attendance in respective online tools of attendee in screen shot or other format.
- Output response/ any test conducted every day or end of the FDP.
- Final results
- Response sheet of feedback of attendees on last day

Post the conduct of the event, the institute will submit the **outcomes achieved from the program.**

SHARE A GOOGLE DRIVE LINK with ISTE IN WHICH INSTITUTE WILL UPDATE THE THINGS ON DAILY BASIS.



Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai -400 050.



Metamorphosis into a center of excellence in higher education and enterprise computing to nurture and facilitate the learners who ought to be the creams of society in terms of their irresistible ambition to be part of entities inventing breakthrough technologies to further the cause of mankind through emerging technologies

Department Vision

Registration Link

<https://forms.gle/iYg692ZELBg3F9zt6>

Registration Fees

1000/-

Last Date to Register

1st July 2023

Coordinators

1. Mr. Vaibhav Ambhire
Assistant Professor



7276640964



vaibhav.ambhire@thadomal.org

2. Ms. Sonali Jadhav
Assistant Professor



8652525206



sonali.jadhav@thadomal.org



Dr. G. T. Thampi
PRINCIPAL

Thadomal Shahani Engineering College
Mumbai, India



Thadomal Shahani Engineering College

THADOMAL SHAHANI
TSEC
ENGINEERING COLLEGE

Organizes
ISTE approved – ONE Week ONLINE STTP
on

APPLIED STATISTICS AND SOFTWARE TOOLS
FOR DATA SCIENCE

3rd July to 8th July 2023



Convener

Dr. G. T. Thampi
Principal, TSEC

Co - Convener

Dr. Tanuja Sarode
Head, Department of
Computer Engineering, TSEC

Under the
Department of
Computer Engineering

Resource Persons

1. Ms. Uttara Athawale
(Prof. of Mathematics, Statistics and Computer Graphics)

2. Dr. Archana Patankar
(Professor, TSEC)

3. Dr. Bhushan Jadhav
(Assistant Professor, TSEC)

4. Dr. Darshan Ingle
(Assistant Professor, TSEC)

5. Mr. Hriday Purohit
(Ex-Data Science Intern @H2O.ai)

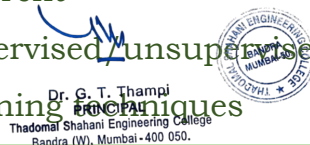
6. Ms. Vijaya Padmadas
(Assistant Professor, TSEC)

- Introduction to Data Science
- **Data Exploration:** Descriptive Statistics, Univariate and Multivariate Exploration
- Inferential Statistics: Various forms of distribution
- Test Hypothesis, Central Limit Theorem
- Type I, Type II Errors, ANOVA
- Methodology and Data Visualization: Overview of Model Building, Cross Validation, Univariate and Multivariate Visualization
- Anomaly Detection: Outlier and Outlier Detection Methods, SMOTE
- Time Series Forecasting: Smoothing Methods, Time Series Analysis, Performance Evaluation
- Applications of Data Science: Predictive Modeling, Time Series Forecasting

Department Mission

Course Objectives

- To understand the data science techniques for different applications
- To apply different statistical models in the domain of data science
- To understand data preparation, exploration and visualization techniques.
- To model and evaluate different supervised/unsupervised learning techniques



Dr. G. T. Thampi
FOUNDED 1983
Thadomal Shahani Engineering College
Bandra (W), Mumbai - 400 050.

1. Building state of art laboratories with the help of internal accruals / government funding / industry funding
2. Collaborative research initiative with premier research organizations in the country
3. Subjecting and initiating learners to entrepreneurship training program and nascent technologies which shall be beyond curriculum
4. Developing instructional content leveraging new findings of cognitive load theories and visual learning
5. Initiating public private partnership to setup startup ventures to help learners evolve as entrepreneurs in ICT
6. Extensively promote participation in application building competition getting organized externally and internally to enable learner to apply theoretical understanding in real time functional area



Certificate

- Participation **E-certificate** will be issued by TSEC after completion of the required criteria.
- Participant with valid ISTE membership will get an **E-certificate** from ISTE.



THADOMAL SHAHANI ENGINEERING COLLEGE

Department of Computer Engineering

ISTE Approved Online STTP on “APPLIED STATISTICS AND SOFTWARE TOOLS FOR DATA SCIENCE” 3 rd July to 8 th July, 2023			
Date	Time	Topic	Resource Person
DAY-1			
3 rd July 2023, Monday	10:00 am to 10:30 am	Inauguration	
	10:30 am to 12:30 pm	<ul style="list-style-type: none"> • Introduction to Data Science • Data Science Process • Motivation to use Data Science Technique • Overview of Data Preparation 	Ms. Vijaya Padmadas
	12:30 pm to 1:30 pm	Lunch Break	
	1:30 pm to 4:30 pm	Descriptive Statistic: Univariate Exploration Multivariate Exploration	Dr. Archana Patankar
DAY-2			
4 th July 2023, Tuesday	10:00 am to 12:30 pm	Inferential Statistics Overview of Various forms of distributions: Normal, Poisson, Test Hypothesis.	Ms. Uttara Athawale
	12:30 pm to 1:30 pm	Lunch Break	
	1:30 pm to 4:30 pm	Central limit theorem, Confidence Interval, Z-test, t-test, Type-I, Type-II Errors, ANOVA	Ms. Uttara Athawale
DAY-3			
5 th July 2023, Wednesday	10:00 am to 12:30 pm	Methodology: Overview of model building, Cross Validation, K-fold cross validation, leave-1 out, Bootstrapping	Dr. Bhushan Jadhav
	12:30 pm to 1:30 pm	Lunch Break	
	1:30 pm to 4:30 pm	Data Visualization: <ul style="list-style-type: none"> • Univariate Visualization: Histogram, Quartile, Distribution Chart • Multivariate Visualization: Scatter Plot, Scatter Matrix, Bubble chart, Density Chart • Roadmap for Data Exploration 	Dr. Bhushan Jadhav



THADOMAL SHAHANI ENGINEERING COLLEGE

Department of Computer Engineering

DAY-4			
6 th July 2023, Thursday	10:00 am to 12:30 pm	Anomaly Detection: Outliers, Causes of Outliers, Anomaly detection techniques, Outlier Detection using Statistics	Mr. Hriday Purohit
	12:30 pm to 1:30 pm	Lunch Break	
	1:30 pm to 4:30 pm	Anomaly Detection: Outlier Detection using Distance based method, Outlier detection using density- based methods, SMOTE	Mr. Hriday Purohit
DAY-5			
7 th July 2023, Friday	10:00 am to 12:30 pm	Applications of Data Science : Predictive Modeling	Dr. Darshan Ingle
	12:30 pm to 1:30 pm	Lunch Break	
	1:30 pm to 4:30 pm	Applications of Data Science : Time series forecasting	Dr. Darshan Ingle
Day-6			
8 th July 2023, Saturday	10:00 am to 12:30 pm	Time Series Forecasting : Smoothing Methods Performance Evaluation	Ms. Uttara Athawale
	1:15 pm to 2:15 pm	Evaluation Test	
	2:30 pm to 3:00 pm	Valedictory and Vote of Thanks	



Registration Details

Sr. No.	Name of the Participant	Email	Designation	College Name
1	Parul Jain	parul.jain@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
2	Darakshan Khan	darakshan.khan@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
3	Ms.Saloni Dhuru	saloni.dhuru@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
4	Mrs. Shubhada Labde	shubhada.l@somaiya.edu	Assistant Professor	K J. Somaiya Institute of Technology, Mumbai
5	Dr. Gauri Shukla	gauri.shukla@thadomal.org	Associate Professor	Thadomal Shahani Engineering College
6	Nabanita Mandal	nabanita.mandal@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
7	Priyanka Leslie Fernandes	priyanka.bandagale@famt.ac.in	Assistant Professor	Finolex academy of management & Technology, Ratnagiri
8	Meenu Bhatia	m6eenu.bhatia@thadomal.org	Assistant Professor	Thadomal shahani engineering college
9	Mohammad Khalid Ansari	khalid.ansari@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
10	Nikita Raichada	nikita.raichada@thadomal.org	Assistant Professor	TSEC
11	Mohammed Adil Shaikh	adil.shaikh@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
12	ISRANI KIRAN KAMLESH	isranikirank@gmail.com	Assistant Professor	THADOMAL SHAHANI ENGINEERING COLLEGE
13	Dr. Archana B. Patankar	archana.patankar@thadomal.org	Professor	TSEC
14	Mrs.Mayura Rajesh Patil	mayura.patil@rsmpoly.org	Assistant Professor	MVPS Rajarshi Shahu Maharaj Polytechnic,Nashik
15	Bincy Chellapandi	bincy.ivin@ves.ac.in	Assistant Professor	VESIT
16	Shilpa Ingoley	shilpa.ingole@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
17	Vaishali Suryawanshi	vaishali.surya@gmail.com	Assistant Professor	TSEC
18	Seema Kolkur	kolkur.seema@gmail.com	Associate Professor	Thadomal Shahani Engineering College
19	Shradha Birje	shradha.birje.89@gmail.com	Assistant Professor	A P Shah



20	Manjusha Kashilkar	mnkashilkar@apsit.edu.in	Assistant Professor	A.P.Shah Institute of technology
21	Juhi Janjua	juhi.ganwani@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
22	Ms. Urjashree Patil	patil4urjashree@gmail.com	Assistant Professor	A. P. Shah Institute of Technology
23	Geetanjali Rohan Kalme	grkalme@apsit.edu.in	Assistant Professor	APSIT,Thane
24	Apeksha Mohite	atmohite@apsit.edu.in	Assistant Professor	A P Shah Institute of Technology
25	Shweta Mahajan	sdmahajan@apsit.edu.in	Assistant Professor	A. P. Shah Institute of Technology
26	Dr. Shilpa Verma	shilpaverma65@gmail.com	Associate Professor	Tsec
27	Mrs. Sheetal Avinash Gondal	sheetalgondal@gmail.com	Assistant Professor	Thadomal Shahani Engineering College
28	Shital Yatish Agrawal	syagrawal@apsit.edu.in	Assistant Professor	A. P SHAH INSTITUTE of Technology
29	Jayant Gadge	jayantrg@gmail.com	Professor	Thadomal Shahani Engineering College
30	Reshma Malik	s_reshma123@yahoo.co.in	Assistant Professor	Thadomal Shahani Engineering College
31	Sneha Vinod Dalvi	svdalvi@apsit.edu.in	Assistant Professor	AP SHAH COLLEGE OF ENGINEERING
32	Jaya Zalte	jaya.zalte@sakec.ac.in	Assistant Professor	SAKEC
33	Rujata Chaudhari	rhchaudhari@apsit.edu.in	Assistant Professor	A.P.Shah Institute of Technology, Thane.
34	Yaminee Patil	ympatil@apsit.edu.in	Assistant Professor	A P Shah Institute of Technology



Resource Persons

Ms. Uttara Athawale

Self Employed
Maharashtra, India

Experience

1. GNIMS Business School
Visiting Professor
Oct 2021 – Present 1 year 4 months
Mumbai, Maharashtra, India
2. Pillais College of Arts Commerce & Science Graphic
Member Board of Studies (Mathematics)
Pillais College of Arts Commerce & Science
Sep 2019 – Present 3 years 5 months
New Panvel
3. Bharati Vidyapeeth Institute Of Mangement & Information Technology, (MCA Dept.)
Assistant Professor
Dec 2009 - Mar 2021 11 years 4 months
4. Sterling Institute Of Management Studies
Lecturer
Jul 2008 - Dec 2009 1 year 6 months
Nerul, Navi Mumbai
5. Pillai's College Of Arts Commerce and Science
Lecturer
Sep 2002 - Jul 2008 5 years 11 months
Sector 16, New Panvel



Dr. Archana Patankar

Professor in Computer Engineering Dept. at Thadomal Shahani Engineering College,
Mumbai

- Designation: Professor
- Educational Details:
 - Ph.D. (Computer Engineering) in 2011
 - ME (Computer Engineering), (VJTI) Mumbai, 1999
 - BE (Computer Engineering), (Walchand College, Sangli) 1996
- Area of Specialization:
 - Machine Learning
 - Deep Learning
 - Computer vision
 - Image Processing
- Teaching Experience: 23 + Years
- Total Experience: 23 + Years
- No of Papers Published in International Journals/Conferences: 95+
- FDP / Conferences/ Workshops (Attended / Organized): 20
- Certification / Diploma Courses Attended: 3
- Membership of Professional Organizations: (ISTE and CSI)
- Ph.D. Students Guided: 5



Dr. Bhushan Jadhav

Assistant Professor in Artificial Intelligence & Data Science Department at Thadomal Shahani Engineering College, Mumbai

- Designation: Assistant Professor
- Educational Details:
 - Ph.D. (Technology)
 - ME (Computer Engineering)
 - BE (Computer Engineering)
- Area of Specialization:
 - Artificial Intelligence and Data science,
 - Python programming
 - R Programming
 - Big data analytics
 - Cloud Computing and DevOPs
- Teaching Experience: 15 Years
- Total Experience: 15 Years
- No of Papers Published in International Journals/Conferences: 11
- Books Published: 10
- FDP / Conferences/ Workshops (Attended / Organized): 31/16
- Certification / Diploma Courses Attended: 18
- Membership of Professional Organizations: (ISTE)



Dr. Darshan Ingle

Assistant Professor in Information Technology Department at Thadomal Shahani Engineering College, Mumbai

- Designation: Assistant Professor
- Educational Details:
 - Ph.D. (Computer Science and Engineering)
- Area of Specialization:
 - Artificial Intelligence
 - Machine Learning
 - Natural Language Processing
 - Deep Learning
 - Tableau
 - Power BI
 - Big data analytics
- Teaching Experience: 12 Years
- Total Experience: 12 Years
- No of Papers Published in International Journals/Conferences: 13
- FDP / Conferences/ Workshops (Attended / Organized): 25
- Certification / Diploma Courses Attended: 6
- Membership of Professional Organizations: (ISTE)



Mr. Hriday Purohit

Ex-Data Science Intern | H2O.ai

- Educational Details:
 - Pursuing MS (Computer Engineering)
 - BE (Computer Engineering)

Experience

1. ZScalar

Working from last six months

- Natural Language Processing
(Research & Development)
- Associate System Engineer
Apr 2021 - Apr 2022 1 year 1 month
Bengaluru, Karnataka, India

2. Rutgers

Part-time lecturer in the domain of Machine Learning

3. H2O.ai

Data Science Intern

- Worked on Natural Language Processing Projects



Ms. Vijaya Padmadas

Assistant Professor in Computer Engineering Department at Thadomal Shahani Engineering College, Mumbai

- Designation: Assistant Professor
- Educational Details:
 - ME (Computer Engineering)
 - BE (Computer Engineering)
- Area of Specialization:
 - Semantic Web
 - Data Science
 - Data Warehousing & Mining
 - Big data analytics
- Teaching Experience: 23 Years
- Total Experience: 23 Years
- No of Papers Published in International Journals/Conferences: 6
- FDP / Conferences/ Workshops (Attended / Organized): 8
- Certification / Diploma Courses Attended: 4





Indian Society for Technical Education
Shaheed Jeet Singh Marg New Delhi – 110 016

CERTIFICATE

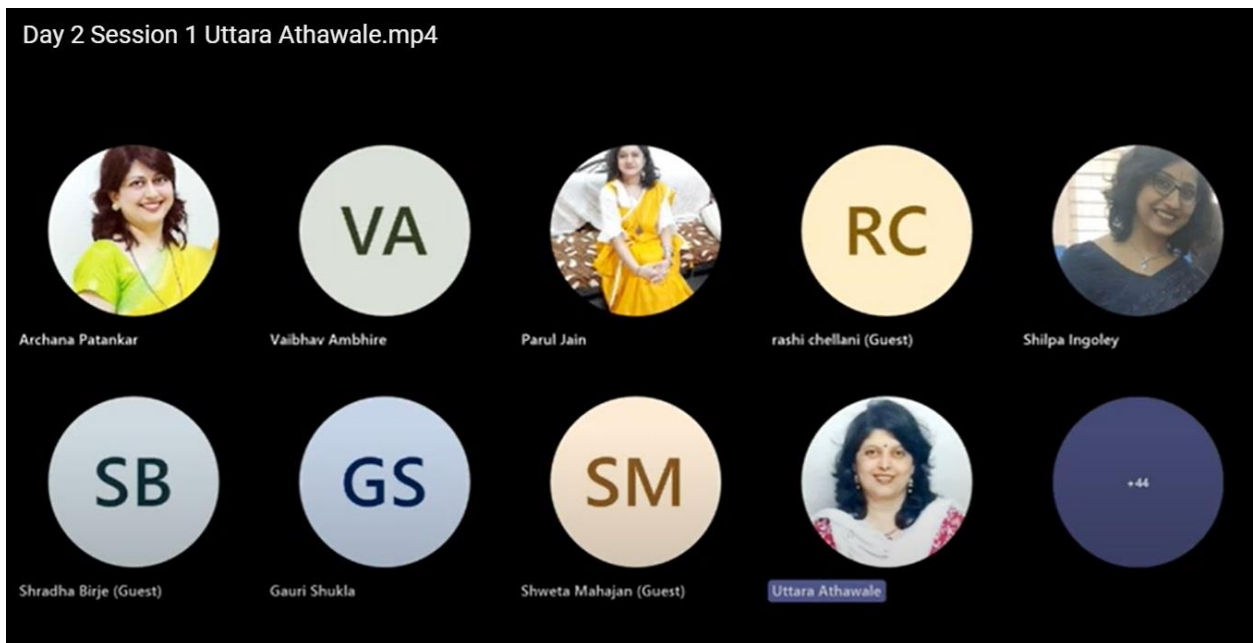
This is to certify that Mr/Ms. **KHAN DARAKHSHAN RIZWAN** has successfully completed ISTE approved Online/SF-STTP/FDP Programme on “**Applied Statistics and Software Tools for Data Science**” held during **03.07.2023** to **08.07.2023** organized by **Thadomal Shahani Engineering College, Bandra (W), Mumbai, Maharashtra.**

Online/P-2023/7676

Executive Secretary

Dr. G. T. Thadomi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai - 400 050.





TSEC session 4th July 2023 final - Excel

Weights	probabilities p(X)	frequency
20-25	0.059991667	6831
25-30	0.056925	6912
30-35	0.0576	6991
35-40	0.058253333	8037
40-45	0.066975	8006
45-50	0.066716667	8126
50-55	0.067733333	8078
55-60	0.067316667	8032
60-65	0.066933333	8001
65-70	0.066675	7906
70-75	0.066675	8075
75-80	0.065833333	6966
80-85	0.065833333	7009
85-90	0.067291667	6880
90-95	0.067291667	6949
95-100	0.05805	

Uttara Athawale

Hands-on.ipynb

```

1 # Grubbs' test
2 def grubbs_test(data, alpha=0.4):
3     n = len(data)
4     t_dist = stats.t.ppf(1 - alpha / (2 * n), n - 2)
5     q_calculated = (np.max(data) - np.mean(data)) / np.std(data)
6     q_critical = (1 - 1) * np.sqrt(np.square(t_dist)) / np.sqrt(n * (n - 2) * np.square(t_dist))
7     return q_critical < q_calculated
8
9 grubbs_outliers = []
10 for feature in range(data_with_outliers.shape[1]):
11     feature_data = data_with_outliers[:, feature]
12     while grubbs_test(feature_data):
13         max_dev = np.abs(feature_data - np.mean(feature_data))
14         outlier_idx = np.where(max_dev == np.max(max_dev))[0][0]
15         grubbs_outliers.append(outlier_idx)
16         feature_data = np.delete(feature_data, outlier_idx)
17
18 grubbs_outliers = np.unique(grubbs_outliers)
19 grubbs_outliers = np.array([idx for idx in grubbs_outliers if idx < data_with_outliers.shape[0]], dtype=int)
20 inliers = np.delete(data_with_outliers, grubbs_outliers, axis=0)
21 outliers_detected = data_with_outliers[grubbs_outliers]
22
23 plot_outliers(inliers, outliers_detected, "Grubbs' test")
24
25

```

Hriday Purohit (Guest)

Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai - 400 050.



Localhost: 8888/Notebooks/Birja.ipynb

Python 3 (ipykernel)

0	Simple average method	219.89	44.28
0	Simple moving average forecast	103.33	15.54
0	Simple exponential smoothing forecast	107.89	16.49
0	Holt's exponential smoothing method	80.9	11.03
0	Holt's exponential smoothing method Multiplica...	74.77	11.03

In []:

Holt Winters' additive method with trend and seasonality

```
In [ ]: y_hat_hwa = test.copy()
model = ExponentialSmoothing(np.asarray(train['Passengers']),
                             seasonal_periods=12,
                             trend='add',
                             seasonal='add')
model_fit = model.fit(optimized=True)
print(model_fit.params)
y_hat_hwa['hw_forecast'] = model_fit.forecast(24)
executed in 100ms, finished 15:36:15 2023-06-04
```

Handwritten notes:

- Simple ES (Single ES: Level α)
- Holt's ES (Double ES: $\alpha + \text{Trend } (\beta)$)
- Holt-Winters ES (Triple ES: $\alpha, \beta + \gamma$ (Seasonality))

Participants:

- MG MAR...
- SA shita...
- AM Apek...
- KI Kiran...
- NR Nikit...
- See...
- VA Vaib...
- AB AYU...
- SK SIMR...
- NK NID...
- SI SHAI...
- +28

Dr. Darshan Ingle (Guest)

Hriday Purohit (Guest)

Microsoft Teams

32:23

Unmute (Ctrl+Shift+M)

Participants: 47

Participants list:

- Makhija Ha...
- SOMYA BA...
- SB
- Shradha Bir...
- Sonali Jadh...
- SB
- SJ
- Parul Jain
- Shilpa Ingo...
- AM
- ALI MEHTAB
- Participants

Video thumbnails:

- Urjashree Patil (Guest)
- Kiran I...
- Geetanjali Kalme (Guest)
- KRISHNA PUNJABI
- Dr. Ta...
- Shrad...
- ALI M...
- Yash ...
- Juhi G...
- Parul J...
- Archa...
- Gauri ...
- Darshan Lasi (Guest)
- Makhija Harsh
- Apeksha Mohite (Guest)
- Sonali ...
- Shilpa ...
- Sahil Khatri (Guest)





REPORT

AI in Supply Chain Management of Agriculture Produce

Thadomal Shahani Engineering College
8th January, 2024 to 13th January, 2024

Coordinator: Dr. Tanuja K. Sarode

Co-coordinator: Ms. Sonali B. Jadhav

AICTE TRAINING AND LEARNING ACADEMY, PUNE

Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai-400 050.



AI in Supply Chain Management of Agriculture Produce

AI in Supply Chain Management of Agriculture Produce:- 6-Days AICTE sponsored FDP was conducted from 8th to 13th January 2024 in which 35 participants from different parts of the country participated.

The speakers for the 6-day workshop on “AI IN SUPPLY CHAIN MANAGEMENT OF AGRICULTURE PRODUCE” were:

Speakers Details

Dr. G. T. Thampi, Principal, Thadomal Shahani Engineering College, Bandra, Mumbai



Designation: Principal, Thadomal Shahani Engineering College, Bandra, Mumbai

Qualification:

- Ph.D. (Reengineering of Engineering Education Technology)
- M.E. (Mechanical Engineering with Machine Design)
- B.Sc. (Mechanical Engineering)

Experience: 37 Years

Dr. Darshan Ingle, Thadomal Shahani Engineering College, Bandra, Mumbai



Designation: Assistant Professor at Thadomal Shahani Engineering College, Bandra, Mumbai.

Qualification:

- Ph.D. (Computer Science and Engineering)
- M.E.(Computer Technology)

Experience: 14 years

Dr. Anjali Yeole, Vivekanand Education Society's Institute of Technology



Designation: Assistant Professor at Vivekanand Education Society's Institute of Technology

Qualification:

- Ph.D. (Information Technology)
- M.E. (Computer Engineering)
- B.E. (Computer Engineering)

Experience: 31 Years

Dr. Gopal Pardesi, Associate Professor in Thadomal Shahani Engg. College



Designation: Associate Professor in Thadomal Shahani Engineering College

Qualification: Ph.D. (IT)

Experience: 31 Years

Dr. Ramchandra Mangrulkar, Dwarkadas J. Sanghvi Engg. College, Vile Parle, Mumbai	
	<p>Designation: Professor in Department of Information Technology, Dwarkadas J. Sanghvi College of Engineering, Mumbai</p> <p>Qualification:</p> <ul style="list-style-type: none"> Ph.D. (Computer Science and Engineering) M.Tech. (Computer Science and Engineering) B.E. (Computer Science and Engineering) <p>Experience: 23 Years</p>
Prof. Yogesh Pingle, Vidyavaridhi’s College of Engineering & Technology, Vasai Road	
	<p>Designation: Deputy HOD and Assistant Professor, Computer Science Engineering (Data Science)</p> <p>Qualification:</p> <ul style="list-style-type: none"> Pursing Ph.D. (Computer Engineering) M.E. (Computer Engineering) B.E. (Computer Engineering) <p>Experience: 18 Years</p>
Mr. Vishal Tejawani, Buildasap.in, Mumbai	
	<p>Designation: Founder of Buildasap.in</p> <p>Qualification:</p> <ul style="list-style-type: none"> B.E.(Computer Engg.) <p>Experience: 10 years</p>
Ms. Amita Dhadave, State Bank Officers Association Public School	
	<p>Designation: Yoga Teacher at State Bank Officers Association Public School</p> <p>Qualification:</p> <ul style="list-style-type: none"> BMS (Motilal Jhunjhunwala College) M.A. (Yogashastra, from K. J. Somaiya College) Yoga Teacher Training Course <p>Experience: 12 years</p>
Dr. Monika Mangla, Dwarkadas J. Sanghvi Engg. College, Vile Parle, Mumbai	
	<p>Designation: Associate Professor in Information Technology, Dwarkadas J. Sanghvi College of Engineering.</p> <p>Qualification:</p> <ul style="list-style-type: none"> Ph.D. (Computer Science,2019) ME (SE,2007) BE (CSE, 2001) <p>Experience: 20 Year</p>

ATAL FDP on “AI in Supply Chain Management of Agriculture Produce”

The schedule of the FDP was as below-

Day	Session I 9:30 AM - 11:30 AM	11.45 AM-1:15 PM	1:15 PM-2:00 PM	Session II 2:00 - 4:30 pm	Session III 4:30 - 5:30 pm
Monday 08/01/2024	Inauguration and Keynote address Dr. G. T. Thampi Principal, TSEC	Introduction to Artificial Intelligence and related technologies Dr. Darshan Ingle Assistant Professor, TSEC, Bandra	L U N C H B R E A K L U N C H B R E A K	Practical Session: Hands on Session on AI Classification Algorithms for Supply Chain Management Dr. Darshan Ingle Assistant Professor, TSEC, Bandra	Article Discussion
Tuesday 09/01/2024	Introduction to AI in Supply Chain Management Dr. Anjali Yeole Associate Professor, VESIT, Chembur, Mumbai	Fundamentals of Data Collection and Preprocessing with Demand Forecasting Models Dr. Gopal Pardesi Associate Professor, TSEC, Bandra		Practical Session: Hands on Data Collection and Preprocessing with Demand Forecasting Models for Supply Chain Management Dr. Gopal Pardesi Associate Professor, TSEC, Bandra	Article Discussion
Wednesday 10/01/2024	Inventory Management with AI Prof. Ramchandra Mangrulkar Professor, DJSCE, Vileparle	AI enabled IOT as pervasive & ubiquitous technological artifacts for tracking & monitoring inventory systems. Prof. Yogesh Pingle Assistant Professor, VCET, Vasai		Practical Session: Hands on Session on AI Clustering Algorithms for Supply Chain Management Prof. Yogesh Pingle Assistant Professor, VCET, Vasai	Article Discussion

ATAL FDP on “AI in Supply Chain Management of Agriculture Produce”

The inauguration was held on 8th January 2024 at 9:30 am. Dr. G. T. Thampi Principal TSEC, Vice principal TSEC Dr. Jayant Gadge and HOD IT and Vice Principal TSEC Dr. Mukesh Israni, Coordinator, Co-ordinator and participants were present.

Ms. Parul Jain faculty of Computer Engineering department welcome all the dignitaries and participants. Dr. G. T. Thampi Principal TSEC gave the key note address to and Coordinator proposed the Vote of Thanks.

Some screenshots of the inaugural function are as below.



 **THADOMAL SHAHANI ENGINEERING COLLEGE** 
DEPARTMENT OF COMPUTER ENGINEERING
ONE WEEK FACULTY DEVELOPMENT PROGRAM ON
“AI IN SUPPLY CHAIN MANAGEMENT OF AGRICULTURE PRODUCE”

January 8, 2024 to January 13, 2024
Sponsored by
All India Council for Technical Education (AICTE) ATAL Academy

DR. G. T. THAMPI
PRINCIPAL

DR. TANUJA SARODE
COORDINATOR

MS. SONALI JADHAV
CO-COORDINATOR



ATAL FDP on “AI in Supply Chain Management of Agriculture Produce”

Following is the Participants list

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ATAL FDP on “AI in Supply Chain Management of Agriculture Produce”

FDP Sessions photos



**Thadomal Shahani Engineering College
Computer Engineering Department
AICTE ATAL One Week FDP on
“AI in Supply Chain Management of Agricultural Produce”**

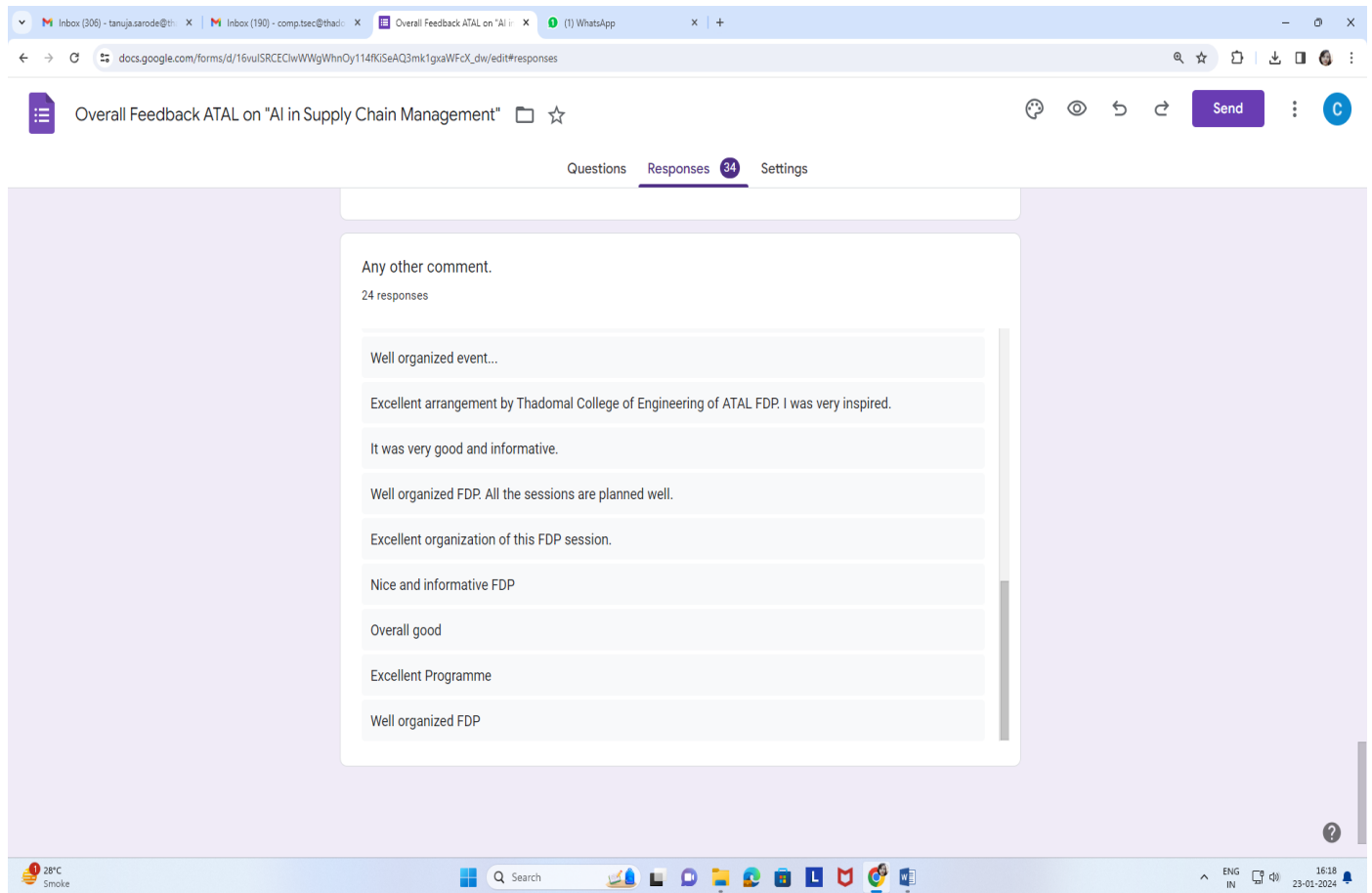


ATAL FDP on “AI in Supply Chain Management of Agriculture Produce”

Some pics of the faculties who gave feedback for the FDP are as below



Some of the feedback received for the workshop are as below



It was a great Initiative by ATAL Academy. I am thankful to AICTE for giving me this opportunity to conduct sponsored FDP for faculty members of technical institute of India. I got good response for registration as well as lots of compliment of arranging the FDP content and hands on.

ISTE approved – ONE Week Online STTP on
Generative Adversarial Network and Auto Encoders for Computer
Vision

Organized and conducted by
Department of Information Technology,
Thadomal Shahani Engineering College

Date: 3rd June 2024 to 8th June 2024

Convener: Dr. G. T. Thampi
Co-convener: Dr. Mukesh Israni

Coordinators: 1. Dr. Shachi Natu

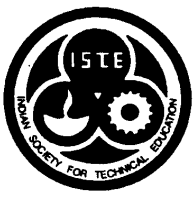
2. Dr.  Nagaveni Hebbar

Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai - 400 050.



Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai - 400 050.





भारतीय तकनीकी शिक्षा संस्था INDIAN SOCIETY FOR TECHNICAL EDUCATION

(Under the Societies' Registration Act XXI of 1860)

Dr. S.M. Ali
Executive Secretary

ISTE/Proceedings/STTP-SF-MAH-022/2024-25

April 23, 2024

Proceedings of Executive Secretary, ISTE

Sub. : Sanction to conduct full time Short-term Training Programme on Self-financing basis for the financial year 2024-2025.

Sanction is hereby accorded to the following institution for the conduct of the SF-STTP/FDP programme indicated below:

Name of Institution	:	Thadomal Shahani Engineering College Mumbai – 400 050
Topic	:	Generative Adversarial Network and Auto encoders for Computer Vision
Name & Address of Coordinators	:	Dr. Shachi Natu Dr. Nagaveni Hebbar Asst. Prof. Asst. Prof.
Duration	:	One Week (Minimum 05 Working Days)
Proposed dates	:	03-06-2024 to 08-06-2024

Terms and Conditions

The institution offering the Programmes should be approved by AICTE and must be Institutional Member of ISTE. Institutions having ISTE Faculty Chapter and Students Chapter shall be preferred. There will be no financial commitment on the part of ISTE on account of this programme. The fee of one **proposal is Rs. 1180/- (Incl. 18% GST)** paid by NEFT/RTGS along with proposal in the following ISTE Account (**Name of Account: ISTE Membership Fee, Account No: 6707247614 Bank: Indian Bank IFSC Code: IDIB000M089 Branch: Mehrauli Road New Delhi**).

- 1 This will be a Self Financing program of the duration of 1 week/2 weeks/4 weeks.
- 2 The registration fee of the participants may be fixed by the host institution.
- 3 ISTE Life membership is necessary for participants to attend SF programmes. However, If any participant is not having life membership he/she may take the membership of ISTE before the commencement of the programme via web portal <https://membership.isteonline.in>

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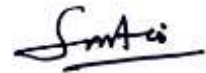
Shaheed Jeet Singh Marg, Near Katwaria Saria, New Delhi – 110 016
Phone: 91-11 26513542, 26514234, E mail: istedhq@isteonline.org Website: www.isteonline.in
f : www.facebook.com/indian.society.for.technical.education



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- 4 The final report as mentioned in these guidelines is to be submitted to ISTE within 15 days after completion of the Programme.
- 5 The institute should ensure that the Resource Persons should be well known personalities having thorough knowledge and he/she should be from an Institute or Industry.
- 6 **e-Certificate to ISTE Life Members will be issued by ISTE from this office. Operational and processing fee of Rs. 100 +18% GST (Total Rs. 118/-) will be charged per participant. Institute conducting the program will collect the fee from participants and will send it to ISTE by NEFT/RTGS with list of participants with their ISTE Life Membership Number. Institute conducting program will not issue Certificates with ISTE logo to Participants. Course coordinator is requested to ensure the same and attach payment proof or UTR number.**
- 7 **At least one test at the end is to be conducted to judge the performance of participants. Institute can conduct more test, if they desire. Attendance and successful completion of Test conducted is mandatory to receive certification by ISTE. Co Ordinator should ensure this while submitting list of participants to ISTE.**
- 8 **The Digital e-certificates to eligible participants will be sent by ISTE Delhi through organizing Institute.** The certificate contains the ISTE logo at the top. The digitally signed e-certificates will bear the Signatures of Executive Secretary, ISTE.
- 9 Covid Guidelines issued from time to time are to be followed strictly as notified by the Govt. during the Programme.



Executive Secretary

To,
The Principal
Thadomal Shahani Engineering College
Nari Gursahani Marg, TPS III
Bandra (W), Mumbai – 400 050
Maharashtra State

Copy to:

Dr. Shachi Natu
Coordinator
Thadomal Shahani Engineering College
Nari Gursahani Marg, TPS III
Bandra (W), Mumbai – 400 050
Maharashtra State



Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai -400 050.



ABOUT TSEC

Thadomal Shahani Engineering College (TSEC) is an 'A' Grade Institute managed by Hyderabad (Sind) National Collegiate Board and approved by the All India Council for Technical Education (AICTE), affiliated to the University of Mumbai. Four programs of the college are accredited by National Board of Accreditation. TSEC is constantly identifying and developing new and nascent technologies such as Artificial Intelligence, Machine Learning, Deep Learning and Block Chain Technology, for enhancing student learning and growth.

ABOUT DEPARTMENT

Department of Information Technology was established in year 1998 with a clear view of forerunner in the field of I.T. the department seeks to evolve towards excellence and adapt itself to the rapid advancements in specialized fields. Vision of the department is to be known globally for its core competence in terms of intuitive and intelligent architectural solutions on convergence of problems to logic by perpetuating product and process innovations.

COURSE OBJECTIVES

- To help the participants revisit nascent ML/DL algorithms putting these in the context of Generative AI & architecture of LLM
- To initiate learners to ways & means of newly evolving algorithms and techniques in NLP based on newer hardware computational facilities
- Understanding newer Neural Networks like Adversarial NN and juxtaposing same with Reinforcement Learning
- To help participants to develop a differentiated understanding of Generative Autoencoders & Variational autoencoders, which can be applied in Computer Vision

RESOURCE PERSONS

- 1) **Dr. G. T. Thampi**
- 2) **Dr. Seema Kolkur**
- 3) **Dr. Ujwala Bharambe**
- 4) **Dr. Shachi Natu**
- 5) **Dr. Himani Deshpande**
- 6) **Prof. Dipali Koshti**
- 7) **Eminent Industry Experts**

COURSE CONTENTS

- ❖ Introduction to generative AI and its applications
- ❖ Sequence generation models RNN and LSTM
- ❖ Introduction to Generative Adversarial Networks, their types and applications
- ❖ Autoencoders, Variational autoencoders and their applications
- ❖ Introduction to Transformers and various transformer based models
- ❖ Fundamentals of Large Language models, pre-training and fine tuning
- ❖ Introduction to Prompt Engineering and Retrieval Augmented Generation
- ❖ Ethical considerations and challenges in Generative AI

REGISTRATION FEES

- ❖ Rs. 500/- (Inclusive of course material and E-certificate)
- ❖ Last Date of Registration: 30th May 2024
Confirm your seat by filling the below form
<https://forms.gle/wCubAegkdK1ygcGJ9>

CORRESPONDENCE

> **Dr. Shachi Natu**

E-mail: shachi.natu@thadomal.org

Contact: 9881357812

> **Dr. Nagaveni Hebbar**

E-mail: nagaveni.hebbar@thadomal.org



THADOMAL SHAHANI ENGINEERING COLLEGE

DEPARTMENT OF INFORMATION TECHNOLOGY
IN ASSOCIATION WITH TSEC IIC AND TSEC IQAC
PRESENTS

ISTE APPROVED ONE WEEK ONLINE SHORT TERM TRAINING PROGRAM on

“Generative Adversarial Network and AutoEncoders for Computer Vision”

Duration: 3rd June – 8th June, 2024

Convener: Dr. G. T. Thampi

Co-Convener: Dr. Mukesh Israni

Co-ordinator: Dr. Shachi Natu, Dr. Nagaveni Hebbar



**Address: Nari Gursahani Marg TPS III, Linking road
Bandra(W) Mumbai-400050.**



THADOMAL SHAHANI ENGINEERING COLLEGE

Department of Information Technology in Association with TSEC IIC and TSEC IQAC

Presents One Week ISTE Approved STTP

on

'Generative Adversarial Network and Autoencoders for Computer Vision'

03rd – 08th June 2024




Time	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
	03.06.2024	04.06.2024	05.06.2024	06.06.2024	07.06.2024	08.06.2024
10:00-11:30	Keynote Address: Introduction to Generative AI, Overview of Generative Models and it's Applications (Dr. G.T. Thampi, Principal, TSEC)	Generative Models: Introduction to Generative Adversarial Network (GAN), their Types and Applications (Dr. Seema Kolkur, TSEC)	Transformers with hands on (Dr. Shachi Natu, TSEC)	Large Language Models: Fundamentals, architecture, training, fine tuning (Dr. Mayank Saini, Manager Data Science Publicis Sapient)	Prompt Engineering with Hands-on (Mr. Abhishek Murkute, Associate Manager, Leading IT Firm)	Ethical Considerations and Challenges in Generative AI (Ms. Twinkle Chavda, Jio Platforms Ltd.)
11:45-1:15	Sequence Generation Models: Recurrent Neural Networks (RNNs) and Long Short-Term Memory Networks (LSTMs) (Dr. Himani Deshpande, TSEC)	Autoencoders, Variational Autoencoders (VAE) and their Applications (Prof. Dipali Koshti, FRCRCE)	Exploring Transformer Models: BERT and GPT (Dr. Ujwala Bharambe, TSEC)	GenAI-Enabled Conversational AI with Illuminating Case Studies (Dr. Mayank Saini)	RAG, Vector Database Introduction to Langchain framework (Mr. Abhishek Murkute)	Research Trends in Generative AI Ms. Neha Thakur, Jio Platforms Ltd.)
02:00-4:00	Hands-on session: RNN and LSTM (Dr. Himani Deshpande, TSEC)	Hands on session: Auto encoders, VAE (Prof. Dipali Koshti, FRCRCE)	Hands on session: LLM for building efficiencies in Teaching- Learning processes, (Dr. Ujwala Bharambe, TSEC)	Hands on using LLM for Chabot creation (Dr. Mayank Saini)	Hands on session: Retrieval Augmented Generation (Dr. Shachi Natu, TSEC)	Quiz session and valedictory function

Co-ordinators: Dr. Shachi Natu and Dr. Nagaveni Hebbar

Convener: Dr. G. T. Thampi

Co-Convener Dr. Mukesh Israni


Dr. G. T. Thampi
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Registration Details:

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57	Atharva Jadhav	me.atharvajadhav@gmail.com	Student	Thadomal Shahani Engineering College
58	Vignesh Pai	vigneshpai27@gmail.com	Student	Thadomal Shahani Engineering College



Dr. G. T. Thampi
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Resource Persons:

Sr. No.	Name of the Speaker	Qualification	College/Institute
1	Dr. Himani Deshpande	Ph.D.	Thadomal Shahani Engineering College
2	Dr. Seema Kolkur	Ph.D.	Thadomal Shahani Engineering College
3	Prof. Dipali Koshti	M.E., Ph.D.(Pursuing)	Fr. Conceicao Rodrigues College of Engineering
4	Dr. Shachi Natu	Ph.D.	Thadomal Shahani Engineering College
5	Dr. Ujwala Bharambe	Ph.D.	Thadomal Shahani Engineering College
6	Dr. Mayank Saini	Ph.D.	Data Science Manager at Publicis Sapient
7	Mr. Abhishek Murkute	M.E.	Associate Manager in leading IT firm
8	Ms. Neha Thakur	M.E., Ph.D.(Pursuing)	Jio Platforms Ltd.
9	Ms Twinkle Chavda	C.A	Jio Platforms Ltd.





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Certificate

This is to certify that **NIKHILESH JOSHI** has successfully completed the ISTE approved Self-Financing Faculty Development Program on “**Generative Adversarial Network and AutoEncoders for Computer Vision**” held during **03.06.2024** to **08.06.2024** organized by **Thadomal Shahani Engineering College, Mumbai, Maharashtra.**

FDP/2024-25/352

Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai - 400 050.



Executive Secretary

Inaugural Function of one week STTP on Generative Adversarial Network and Autoencoders for Computer Vision

01:00:25

Take control Pop out Chat People Raise View Apps More Camera Mic Share Leave

Participants

Type a name

Share invite

AM Anrita Mathur (Guest) Meeting guest

AM Anjali Malviya

Archana Kale

Arun Kulkarni

AV ashish vanmali

AJ ATHARVA JADHAV

BB Bhavna Bose

Chetan Agarwal

DJ Dr Vaishali Jad... (Guest) Meeting guest

DP Dr. Gopal Pard... (Guest) Meeting guest

DR Dr. Rohini (Guest) Meeting guest

91°F Haze

Search

10:46 AM 03-06-2024

CONTIN...

Advantages

- Mathematically Principled: Based on variational inference, providing a clear probabilistic interpretation.
- Smooth Latent Space: Encourages smooth transitions and interpolations in the latent space, useful for tasks like data interpolation and semi-supervised learning.
- Stable Training: Generally, more stable to train compared to adversarial methods.

Disadvantages

- Blurry Outputs: Reconstruction quality can be limited, often producing blurry images due to the focus on distribution matching rather than sharp detail reproduction.
- Mode Collapse: Less prone to mode collapse than GANs but can still suffer from it in complex datasets.

G. T. Thampi

Inaugural Function of one week STTP on Generative Adversarial Network and Autoencoders for Computer Vision

02:27:38

Take control Pop out Chat People Raise View Apps More Camera Mic Share Leave

Participants

Type a name

Share invite

Presenters (3)

Mute all

NH Nagaveni Hebbar

Himani Deshpande

SN Shachi Natu Organizer

Attendees (43)

AM Adarsh Mishra

AM Anrita Mathur (Guest) Meeting guest

Arun Kulkarni

AV ashish vanmali

AJ ATHARVA JADHAV

BB Bhavna Bose

Chetan Agarwal

Deep RNN

Diagram illustrating a Deep RNN architecture. The input sequence is $x^0, x^1, x^2, x^3, \dots$. The hidden state sequence is $h^0, h^1, h^2, h^3, \dots$. The output sequence is y^1, y^2, y^3, \dots . The diagram shows the flow of information through the hidden states and the generation of outputs. The diagram is attributed to DR. HIMANI DESHPANDE (TSEC, MUMBAI).

Himani Deshpande


Nifty smicap +2.23%

Search

12:13 PM 03-06-2024

STTP on GAN and Autoencoders for Computer Vision- Day 2

Loss function for VAE



- Instead of mapping input to a fixed latent vector, we map it to a distribution.
- Force latent variables to be normally distributed.
- Instead of passing the encoder output to the decoder, use mean and standard deviation describing the distribution.
- Quantify the distance between learned distribution and standard distribution using KL divergence.
- The goal of this is to minimize the difference between a supposed distribution and original distribution of dataset.
- While training, force the normal distribution as close as possible to the standard normal distribution using KL (Kullback–Leibler divergence) loss function.
- Loss function has two terms now – KL-loss and reconstruction loss

Loss function = reconstruction loss + KL divergence loss

Prof. Dipali Koshti, Fr. CRCE, Bandra, Mumbai

STTP on GAN and Autoencoders for Computer Vision- Day 2

02:16:54

teams.microsoft.com/v2/meeting/join=true?/l/meetup-join/19p05y4AQNCglXud5lw4P5FuaequNetMh45FiPGmpuy81@thread.tacv2/1717433065469?context=%7b%22%3a...

Stay in the know. Turn on desktop notifications.

01:23:50

33 People

Turn camera off (Ctrl+Shift+V)

Meenu Bha... Shachi Natu
Vijaya Bhar... Kalpana IU...
Vipra Dave... Purni Agar...
Sonal Jadh... View all

93°F Smoke

ENG INTL 15:50 04-06-2024

STTP on GAN and Autoencoders for Computer Vision- Day 3

01:46:13

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Participants

Type a name

Share invite

Presenters (2) Mute all

- NH Nagaveni Hebbar
- SN Shachi Natu Organizer

Attendees (39)

- AM Adarsh Mishra
- AM Amrita Mathur (Guest) Meeting guest
- AM Amrita Mathur (Guest) Meeting guest
- AV ashish vanmali
- AJ ATHARVA JADHAV
- BB Bhavna Bose
- Chetan Agarwal
- DJ Dr Vaishali Jad... (Guest) Meeting guest

Finetuning model Huggingface.ipynb

```

+ Code + Text
...
!pip install tensorflow as tf
Loading... Formers import TFAutoModel, AutoTokenizer # to load pretrained model and its tokenizer
from datasets import load_dataset

[ ] # base version of BERT having 12 encoders, uncased means model does not distinguish between lower case n upper case
model = TFAutoModel.from_pretrained("bert-base-uncased")

/usr/local/lib/python3.10/dist-packages/huggingface_hub/utils/_token.py:89: UserWarning:
The secret `HF_TOKEN` does not exist in your Colab secrets.
To authenticate with the Hugging Face Hub, create a token in your settings tab (https://huggingface.co/settings/tokens), set it as secret in you
You will be able to reuse this secret in all of your notebooks.
Please note that authentication is recommended but still optional to access public models or datasets.
Executing (15s) <<cell line: 1>> system() > _system_compat() > _run_command() > _monitor_process() > _poll_process()

```

Nifty midcap +2.87%

STTP on GAN and Autoencoders for Computer Vision- Day 3

02:16:05

Pop out Chat Q&A People Raise React View Apps More Turn camera on (Ctrl+Shift+O) Mute all

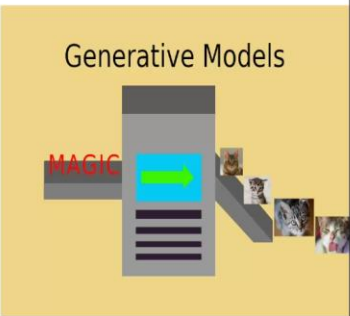
Participants

Turn camera on (Ctrl+Shift+O) Mute all

- Hemalatha K N (Guest) Meeting guest
- AM Adarsh Mishra
- AM Amrita Mathur (Guest) Meeting guest
- AM Amrita Mathur (Guest) Meeting guest
- Arun Kulkarni
- AV ashish vanmali
- AJ ATHARVA JADHAV
- BB Bhavna Bose
- Chetan Agarwal
- DJ Dr Vaishali Jad... (Guest) Meeting guest
- DN Dr. Swati Narwane
- GS Gauri Shukla
- GK Geeta Karande

Introduction to Generative Language Models

- Generative language models are AI models that can **generate human-like text** based on a given prompt or context.
- They **learn from large amounts** of training data to capture the patterns and structures of language, and their applications range from creative writing to natural language understanding and communication



Ujwala Bharambe

32°C Partly sunny

STTP on GAN and Autoencoders for Computer Vision- Day 3

10:55

Pop out Chat Q&A People Raise React View Apps More

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Participants

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Share invite

Presenters (3) Mute all

- NH Nagaveni Hebbar
- SN Shachi Natu Organizer
- UB Ujwala Bхарambe

Attendees (27)

- AM Adarsh Mishra
- AM Amrita Mathur (Guest) Meeting guest
- AK Arun Kulkarni
- AV ashish vanmali
- AJ ATHARVA JADHAV
- BB Bhavna Bose
- DN Dr. Swati Narwane

Ujwala Bхарambe

33°C Partly sunny

Search

ENG INTL 02:06 PM 05-06-2024

BERT

brown 0.92
lazy 0.05
playful 0.03

BERT has 2 training objectives:

1. Predict the Masked word (a la CBOW)

15% of all input words are randomly masked

- 80% become [MASK]
- 10% become revert back
- 10% become are deliberately corrupted as wrong words

<CLS> The brown dog
x₁ x₂ x₃ x₄

STTP on Generative Adversarial Network and Autoencoders for Computer Vision Day 4

58:11

Take control Pop out Chat Q&A People Raise React View Apps More

Camera Mic Share Leave

Participants

Type a name

Share invite

Presenters (3) Mute all

- NH Nagaveni Hebbar
- MS Mayank Saini
- SN Shachi Natu Organizer

Attendees (35)

- Hemalatha K N (Guest) Meeting guest
- AM Adarsh Mishra
- AM Amrita Mathur (Guest) Meeting guest
- AK Arun Kulkarni
- AV ashish vanmali
- AJ ATHARVA JADHAV
- BB Bhavna Bose
- CA Chetan Agarwal

Mayank Saini

Nifty smicap +3.55%

Search

ENG INTL 10:40 AM 06-06-2024

Evaluation Criteria in Detail

NLU Capability

- Intent Classification
- Entity Extraction
- Dialog Management
- Languages Supported

NFRs

- Pricing
- Security
- Model Transparency
- Cloud Compatibility

Development Features

- Channel Integrations
- Customizability
- Search Support
- SDK Support
- RBAC Support

Analytics and Insights

- Log Storage
- Behavioral Analytics
- Monitoring and Maintenance

Ease of Development

- Pre-built Templates
- Expertise Required
- UI for Dialog Composition
- Bulk Processing

publicis sapient

STTP on Generative Adversarial Network and Autoencoders for Computer Vision Day 4

01:39:16

Chat Q&A People Raise React View Apps More

Camera Mic Share Leave

Participants

Type a name

Share invite

Presenters (3)

Mute all

NH Nagaveni Hebbar

MS Mayank Saini

SN Shachi Natu Organizer

Attendees (41)

Hemalatha K N (Guest) Meeting guest

AM Adarsh Mishra

AM Amrita Mathur (Guest) Meeting guest

AM Aniket Mishra (Guest) Meeting guest

AV Arun Kulkarni

AV ashish varmali

AJ ATHARVA JADHAV

BB Bhavna Bose

S Susmita (G...)

MM Manisha M...

AM Aniket Mis...

V voena (Gue...)

Rupali Patil

Hiimani Des...

Sunita Rath...

G Garima (Gu...)

View all

32°C Haze

Search

11:21 AM 06-06-2024

STTP on GAN and Autoencoders for Computer Vision Day 5

03:22:59

Pop out Chat Q&A People Raise React View Apps More

Camera Mic Share Leave

Participants

Type a name

Share invite

Presenters (3)

Mute all

NH Nagaveni Hebbar

Abhishek (Guest) Meeting guest

SN Shachi Natu Organizer

Attendees (37)

Hemalatha K N (Guest) Meeting guest

AM Adarsh Mishra

AM Amrita Mathur (Guest) Meeting guest

AV Arun Kulkarni

AV ashish varmali

AJ ATHARVA JADHAV

BB Bhavna Bose

SN Shachi Natu

Chetan Ag...

BB Bhavna Bose

RK Rucha Kulk...

ST Shanthi Th...

NH Nagaveni Hebbar

Abhishek (Guest)

Code Editor:

```

[19] def _download_embeddings(download_name="text_embeddings-400", model_name="text_embeddings-400", temperature):
    # embeddings = DownloadEmbeddings(download_name, download_model_url, download_model_checksum, chunk_size=1)
    embeddings = DownloadEmbeddings(download_name=download_name, chunk_size=1)

[22] doc_chunks = doc_of_content(doc_id=1, page_no=1)

[23] doc_index = FAISS.from_texts(doc_chunks, embeddings, metadata={"source": 1, "page": page, "file_name": "file_name"}, for_lang=lang in list(range(len(doc_chunks)), page_no))

[24] query = "what is GPT-3? It is a neural network with 175 billion parameters."
doc_index = FAISS.index(doc_index, embeddings)
doc_index.similarity_search(query)

[25] doc_index.get_doc_content(doc_id=1, page_no=1)

[26] doc_index.get_doc_content(doc_id=1, page_no=1)

[27] doc_index.get_doc_content(doc_id=1, page_no=1)

```

35°C Haze

Search

12:39 PM 07-06-2024

Collaborative Capacity Building Program Sponsored by IEEE Bombay Section

On

A Generative Adversarial Neural Network and Adversarial Auto
Encoders for Effective IP

Organized and conducted by

Information Technology Department, Thakur College of
Engineering and Technology, Kandivali (Lead Institute)

In association with

Thadomal Shahani Engineering College, Bandra(W)

Date: 24 June to 29 June 2024

Convener

Dr. G.T.Thampi, Principal TSEC

Dr. B.K. Mishra-Principal TCET

Programme Monitoring Committee

Dr.Mukesh Israni, HoD IT, TSEC

Dr.Rajesh Bansode, HoD, TCET

Co-ordinators: Mr. Namdeo Badhe and Mrs. Purvi Sankhe

Co-coordinators: Ms. Reshma Malik and Ms. Trupti shah



Dr. G. T. Thampi
PRINCIPAL
Thadomal Shahani Engineering College
Bandra (W), Mumbai -400 050.



Collaborative Capacity Building Program
on

Generative Adversarial Neural Network and Adversarial Auto Encoders for Effective IP

Date : 24th June to 29th June 2024

Registration Form

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Designation : _____

Experience: 1) Teaching _____

2) Industry _____

3) Others _____

IEEE Member Non-IEEE Member

Institute : _____

Mailing address : _____

Email ID: _____

Phone (R) : _____

(M) : _____

Registration Form

Please Register using the following link or Scan QR
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Whatsapp Group link:

<https://chat.whatsapp.com/GlaTOLieq1e8yqZeqHEpW1>

Payment can be done using G-
pay/paytm on following Number:

Ms. Trupti Shah : 9527002108



Programme Conveners

Dr. B. K. Mishra - Principal, TCET

Dr. G. T. Thampi - Principal, TSEC

Programme Advisory Committee

Dr. R. R. Sedamkar, Vice Principal & Director IQAC

Dr. Lochan Jolly, Dean, Student & Staff Welfare

Dr. Vinitkumar J. Dongre Dean, R&D

Dr. Sheetal Rathi, Dean, Academics

Dr. Zahir Aalam, Professor & Dean TP&IL

Programme Monitoring Committee

Dr. Rajesh Bansode, HoD IT, TCET

Dr. Mukesh Israni HoD IT, TSEC

Programme Organizing Committee

Mrs. Pranjali Kasture, Assistant Professor, Dy. HOD-IT, TCET

Dr. Sangeeta Vhatkar, Associate Professor, TCET

Dr. Anil Vasoya, Associate Professor, TCET

Mr. Namdeo Badhe, Assistant Professor, TCET

Mr. Vijay Kumar Yele, Assistant Professor, Dy. COE, TCET

Mrs. Purvi Sankhe, Assistant Professor, TCET

Ms. Neha Kapadia, Assistant Professor, TCET

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Mrs. Mary Margarat, Assistant Professor, TCET

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Ms. Kriti Das, Assistant Professor, TCET

Ms. Nidhi Bhavsar, Assistant Professor, TCET

Dr. G. T. Thampi

Ms. Anurupa Singh, Assistant Professor, TCET

Thadomal Shahani Engineering College
Bandra (W), Mumbai - 400 050.

Present

Collaborative Capacity Building Program
Sponsored by



on

Generative Adversarial Neural Network and Adversarial Auto Encoders for Effective IP

Date : 24th June to 29th June 2024

Co-ordinator

Mr. Namdeo Badhe

Assistant Professor, TCET

Mrs. Purvi Sankhe

Assistant Professor, TCET

Co-coordinator

Ms. Trupti Shah

Assistant Professor, TCET

Ms. Reshma Malik

Assistant Professor, TSEC

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THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY
Autonomous College Affiliated to University of Mumbai

Approved by All India Council for Technical Education(AICTE) and Government of Maharashtra

A - Block, Thakur Educational Campus, Shyammarayan Thakur Marg, Thakur Village, Kandivali (East), Mumbai - 400 101

Tel.: 022-6730 8000 / 8106 / 8107 Telefax: 022-2846 1890

Email: tcet@thakureducation.org • Website: www.tcetmumbai.in www.thakureducation.org

About The Programme:

This one-week Collaborative Capacity Building Program on Generative Adversarial Network (GAN), adversarial autoencoders, and their variants. We learn with explaining adversarial learning and the vanilla GAN. Then, we explain the conditional GAN and DCGAN. Then, we introduce some applications of GAN such as image-to-image translation (including PatchGAN, CycleGAN, DeepFaceDrawing, simulated GAN, interactive GAN), text-to-image translation (including StackGAN), and mixing image characteristics (including FineGAN and MixNMatch). Finally, we explain the autoencoders based on adversarial learning including adversarial autoencoder, PixelGAN, and implicit autoencoder.

Objectives:

The participants shall be able to:

- Understand the fundamental concepts and components of GANs and Autoencoders.
- Apply GANs and Autoencoders for image processing tasks using TensorFlow or PyTorch.
- Analyse the difference between various types of GANs and Autoencoders.
- Evaluate the performance of GANs and Autoencoders using metrics like Inception Score (IS) and Frechet Inception Distance (FID).
- Create advanced GANs and Autoencoders for specific image processing applications.

Expected Outcomes:

The participants will be able to:

- Explain the fundamental concepts, the architecture and training procedure of GANs and Autoencoders.
- Implement GANs and Autoencoders for image processing tasks, including image generation, denoising, and compression using TensorFlow or PyTorch.
- Compare and differentiate between various types of GANs and Autoencoders.
- Evaluate and fine-tune the GANs and Autoencoders for optimal performance.
- Create advanced GANs and Autoencoders for specific image processing applications.

About IEEE:

IEEE, an association dedicated to advancing innovation and technological excellence for the benefit of humanity, is the world's largest technical professional society. It is designed to serve professionals involved in all aspects of the electrical, electronic and computing fields and related areas of science and technology that underlie modern civilization.

About IEEE Bombay Section:

Aligned with the Vision and Mission of IEEE, IEEE Bombay Section was formed in 1976 under Region 10 with the Territory of Maharashtra, MP (and Chhattisgarh), Gujarat, Hyderabad and Goa. The Hyderabad, Gujarat, Pune, MP & Chhattisgarh were later upgraded to Separate section. The Section's major activities are led by its standing committees and affinity groups and its 14 society chapters. Student Activities are focussed on Students whereas specific membership related activities such as Women In Engineering activities, Young Professional and Life Members are driven by respective groups. IEEE Bombay Section has special interest group on Humanitarian activities (SIGHT) and all these work tirelessly in pushing their high-impact activities to the beneficiary groups. IEEE Bombay Section is formally registered as IEEE Mumbai Section Welfare Association and is registered as Education Charitable NGO.

Who can participate :

All the faculty members of higher and technical education institutes.culty members of higher and technical education institutes.

Registration:

The Registration is free for IEEE Members and Rs. 250/- for Non IEEE Members Participants are requested to click on the link or scan the QR Code & register. <https://forms.gle/Vwyu5TXNPRiGwPnr8>

Payment can be done using G-pay/paytm on following Number: Ms. Nidhi Bhavsar

Tentative Schedule:

Day	Timing	Topic	Resource Person
Day 1 24/06/2024 Online Mode	10.00 am to 12.00 pm	Inauguration / IEEE members Keynote address	Dr. G. T. Thampi, Principal, TSEC
	1.00 pm to 2.30 pm	Session-1 Introduction to Basic GAN Architecture, Conditional GANs (cGANs), Variational Autoencoders (VAEs), Deep Convolutional GANs (DCGANs)	Dr. Seema Kolkur (TSEC)
	2.45 pm to 4.00 pm	Session-2 Hands-on/case study of morning topics	Dr. Seema Kolkur (TSEC)
Day-2 25/06/2024 Online Mode	10.00 am to 12.15 pm	Session-3 StyleGAN and StyleGAN2, GANs for Image-to-Image Translation,	Mr. Indrajit Singh (Cellstrat)
	2.00 pm to 4.15 pm	Session-4 Hands-on/case study of morning topics	Mr. Indrajit Singh (Cellstrat)
Day-3 26/06/2024 Offline Mode	10.00 am to 12.15 pm	Session-5 Progressive Growing of GANs, GANs for Data Augmentation, GANs for Anomaly Detection, Ethical Considerations,	Dr. Shachi Natu (TSEC)
	2.00 pm to 4.15 pm	Session-6 Hands-on/case study of morning topics	Dr. Shachi Natu (TSEC)
Day-4 27/06/2024 Offline Mode	10.00 am to 12.00 pm	Session-7 Introduction to Auto encoders for Effective Image Processing, Image Denoising, Image Compression, Image Generation	Dr. Gopal Pardesi (TSEC)
	1:00 pm to 2:15 pm	Session-8 Feature Extraction, Anomaly Detection, Dimensionality Reduction, Image Generation using stable diffusion.	Dr. Gopal Pardesi (TSEC)
	2.45 pm to 4.30 pm	Session-9 Hands-on/case study of morning topics	Dr. Gopal Pardesi (TSEC)
Day-5 28/06/2024 Online Mode	10.00 am to 11.00 am	Session - 10 Stress Management	Mr. Rohan Mansukani, Counselor-Stress Management
Day-6 29/06/2024 Offline Mode	11.00 am to 2.00 pm	Valedictory	Internal + HODs
	11.00 am to 02.00 pm	Industrial Visit	Veravali Systems, Vasai

Thadomal Shahani Engineering College
Bandra (W), Mumbai - 400 050.

About TCET:

The Thakur College of Engineering & Technology (TCET), a Graded Autonomous Linguistic Minority Institute was established in AY 2001-02 with a dear objective of providing Quality Technical Education in tune with international standards and contemporary global requirements. TCET offers 17 UG, 5 PG and 5 Ph.D. (Tech.) programmes. Besides this, TCET has started B.Voc. in Artificial Intelligence and Data Science w.e.f. A.Y. 2021-22, Software Development w.e.f. A.Y. 2022-23 and Animation & Graphic Design, Data Analytics w.e.f. A.Y. 2023-24. TCET is ISO 9001:2015 certified Institute. This certification has helped Institute to develop a process-driven student-centric system required for quality education in the 21st century. As a result, Institute is accredited by NAAC with an "A" grade for five years and programmes are accredited by NBA for three years. TCET has always been known for its unique journey of deciphering and deploying innovative approaches in academics & research. The institute also takes initiatives in implementing innovative academic and technology endeavours in line with industry requirements.

About TSEC:

Thadomal Shahani Engineering College (TSEC) is an 'A' Grade Institute managed by Hyderabad (Sind) National Collegiate Board and approved by the All India Council for Technical Education (AICTE), affiliated to the University of Mumbai. Four programs of the college are accredited by National Board of Accreditation. TSEC is constantly identifying and developing new and nascent technologies such as Artificial Intelligence, Machine Learning, Deep Learning and Block Chain Technology, for enhancing student learning and growth.

Important Dates:

Last Date for Registration: 18th June 2024

Contact Details:

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purvi.sankhe@tcetmumbai.in

Ms. Trupti Shah - Mob.: 9527002108

trupti.shah@tcetmumbai.in

Ms. Reshma Malik - Mob.: 9769381584

reshma.malik@thadomal.org

List of Participants:

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12	Monisha Linkesh	monisha.linkesh@tcetmumbai.in	Assistant Professor	Thakur College of Engineering & Technology
13	Pratibha Prasad	monisha.linkesh@tcetmumbai.in	Assistant Professor	Thakur College of Engineering & Technology
14	Ms. Komal Madhukar Dhule	komal.dhule@tcetmumbai.in	Assistant Professor	Thakur College of Engineering & Technology
15	Geetanjali Nilesh Sawant	geetanjali.sawant@famt.ac.in	Assistant Professor	Finolex Academy of Management and Technology
16	Mrs. Minakshi Ghorpade	minakshi.ghorpade@tcetmumbai.in	Assistant Professor	Thakur College of Engineering and Technology

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Resource Person:

Sr.No.	Name of Resource Person	Qualification	Institute /Industry Name
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2.	Dr.Seema Kolkur	Ph.D.	Thadomal Shahani Engineering College ,Bandra,Mumbai
3.	Mr.Indrajit Singh	M.Tech	Cellstrat ,Pune
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Industrial Visit:

Saturday 11:00 am to 2:00 pm

Vervali Systems Pvt.Ltd

6th Floor,

KT Signature,

Ambadi Rd,

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Vasai West, Vasai-Virar, Maharashtra 401202.

Contact Person: Mr. Nilesh Jain CEO

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Certificate of Participation

This is to certify that Dr./Mr./Ms. Mr. Yele Vijaykumar P. From Thakur College of Engineering and Technology has participated in One Week **Collaborative Capacity Building Programme** organized by **Thakur College of Engineering & Technology and Thadomal Shahani Engineering College** on *Generative Adversarial Neural Network and Adversarial Auto Encoders for Effective IP* Sponsored by IEEE Bombay Section conducted during 24th June to 29th June, 2024.

Dr. Sukruti Kaulgud
Chair, EAC,
IEEE Bombay Section

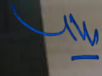
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Report on ISTE Approved One-Week Online Short-Term Training Program on Graph Data Science with Hands-On in Neo4j

Duration: 8th January 2024 – 13th January 2024
Convener: Dr. G. T. Thampi
Co-Convener: Dr. Madhuri Rao
Coordinator: Dr. Himani Deshpande
No. of participants: 22 + 45

The ISTE-approved One-Week Online Short-Term Training Program (STTP) on "**Graph Data Science with Hands-On in Neo4j**" was successfully conducted from **8th January 2024 to 13th January 2024**. The program was organized under the guidance of **Dr. G. T. Thampi** as Convener, **Dr. Madhuri Rao** as Co-Convener, and **Dr. Himani Deshpande** as the Coordinator. A total of **22 faculty members** and **45 students** from various engineering colleges participated in the program, making it an engaging and insightful learning experience.

The primary objectives of the STTP were to familiarize participants with the **concepts of Graph Data Science** and its applications, explore **tools and practices** used in this domain, and enable participants to build strategies for **integrating Graph Data Science in AI-driven applications** to enhance efficiency and productivity. The program was structured to provide a blend of theoretical knowledge and practical experience, ensuring that participants gained comprehensive insights into the field.

The course content covered a wide range of topics, including **Fundamentals of Graph Database, Data Modeling with Graph Databases, Advanced Graph Queries Using Neo4j, Graph Database Administration, Graph Algorithms and Analytics, Graph Visualization and Exploration, and Performance Optimization in Graph Databases**. Each session provided participants with hands-on opportunities to apply the concepts learned, especially using Neo4j, a popular graph database platform.

The program commenced with an introductory session highlighting the importance of Graph Data Science in modern AI-driven applications. Expert speakers delivered lectures on advanced graph algorithms and their applications in solving real-world problems. Participants engaged in interactive hands-on sessions that enabled them to practice data modeling, querying, and optimization techniques. The program concluded with a focus on **performance optimization strategies**, equipping participants to manage large-scale graph databases effectively.

The feedback from participants was overwhelmingly positive. They appreciated the program's structured content, expert delivery, and practical approach. The hands-on sessions were particularly commended for bridging the gap between theoretical knowledge and practical

application. Many attendees expressed their eagerness to integrate Graph Data Science into their academic and research initiatives.

In conclusion, the STTP on **Graph Data Science with Hands-On in Neo4j** successfully achieved its objectives by equipping participants with the knowledge and skills required to apply Graph Data Science in real-world applications. It served as a platform for knowledge sharing, collaboration, and exploration of advanced concepts in this emerging field, leaving a lasting impact on the participants.

Screenshots from the various sessions of STTP

