

## 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

The department of AI and DS is established in the year 2020 with highly qualified senior faculty with doctoral degree. This newly added department of TSEC has been set up with a goal of training students as leaders and researchers in the fields of Artificial Intelligence & Data Science with world class infrastructure, curriculum and comprehensive hands on experience through industry connect programs. Learners aspiring to get exposed to nascent technologies in the realm of computer and digital technology with an aptitude for tracking mathematical complexities shall aspire to join this 4 years degree program in AI and DS which is getting established in the current year. It is an excellent opportunity to satisfy intellectual ego in addition to massive market opportunities.

## COURSE OBJECTIVES

- To make learners familiar with concept of Graph Data Science and related technologies
- To explore different tools and practices used in Graph Data Science
- Building strategies for integration of Graph Data Science in AI driven applications for building efficiencies and productivity

## RESOURCE PERSONS

- Dr. G.T.Thampi (TSEC)
- Dr. Ram Mangrulkar (DJSCE)
- Dr. Anant Marathe (HVPM COE)
- Dr. Kriti Shrivastava (DJSCE)
- Dr. Bhushan Jadhav (TSEC)
- Prof. Vishal Badgujar (APSIT)

## COURSE CONTENTS

- ❖ 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
- ❖ Performance Optimization in Graph databases

## REGISTRATION FEES

- ❖ **Rs. 100/-** (Inclusive of course material and E-certificate)
- ❖ Limited seats are available
- ❖ Confirm your seat by filling the below form  
<https://tinyurl.com/5cd7jt6k>

## CORRESPONDENCE

- ❖ **Dr. Himani Deshpande**  
**E-mail:**  
[himani.deshpande@thadomal.org](mailto:himani.deshpande@thadomal.org)  
**Contact:**  
**8928468012**

### **Note:**

- Certificates will be issued to all the students who will have at least 75% of the attendance and score passing marks in the test conducted at the end of training programme.



**THADOMAL SHAHANI ENGINEERING COLLEGE**

**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND  
DATA SCIENCE**

**PRESENTS**

**30 HOURS STUDENT  
TRAINING PROGRAMME ON**

**“Graph Data Science with  
hands-on in Neo4j”**

**Duration: 8<sup>th</sup> Jan 2024 – 13<sup>th</sup> Jan, 2024**

**Convener: Dr. G. T. Thampi**

**Co-Convener: Dr. Madhuri Rao**

**Co-ordinator: Dr. Himani Deshpande**



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

## 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.

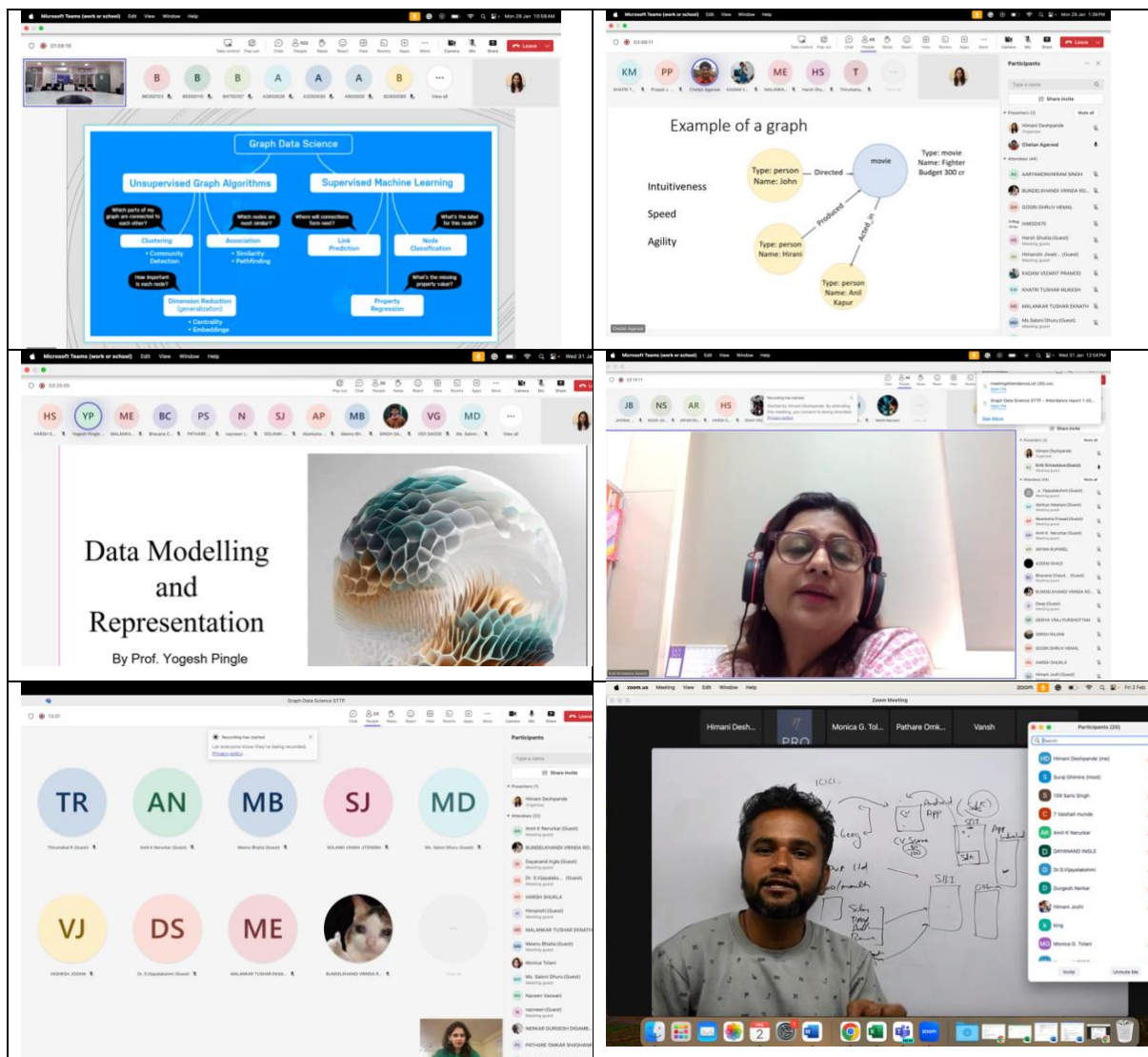
The program commenced with an introductory session highlighting the importance of Graph Data Science in modern AI-driven applications. Expert speakers delivered lectures on advanced graph algorithms and their applications in solving real-world problems. Participants engaged in interactive hands-on sessions 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



**One Week *ONLINE* VALUE ADDED COURSE**  
**on**  
**APPLIED STATISTICS AND SOFTWARE TOOLS**  
**FOR DATA SCIENCE**

**Organized and conducted by**  
**Department of Computer Engineering,**  
**Thadomal Shahani Engineering College**

**Date: 10<sup>th</sup> July 2023 to 15<sup>th</sup> July 2023**

**Convener: Dr. G. T. Thampi**

**Co-convener: Dr. Tanuja Sarode**

**Coordinators: 1. Mr. Vaibhav Ambhire**  
**2. Ms. Sonali Jadhav**



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/r4F7UAKwkvvbMqr4A>

Registration Fees

No Registration Fees

Limited seats are available

Last Date to Register

1<sup>st</sup> 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



Thadomal Shahani Engineering College

Organizes

ONLINE VALUE ADDED COURSE

on

APPLIED STATISTICS AND SOFTWARE TOOLS

FOR DATA SCIENCE

10<sup>th</sup> July to 15<sup>th</sup> 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

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

- **E-certificate will be issued by TSEC for all participants**



THADOMAL SHAHANI ENGINEERING COLLEGE  
Department of Computer Engineering

**Online Value Added Course on  
“APPLIED STATISTICS  
AND  
SOFTWARE TOOLS FOR DATA SCIENCE”  
10<sup>th</sup> July to 15<sup>th</sup> July, 2023**

Date	Time	Topic	Resource Person
<b>DAY-1</b>			
<b>10<sup>th</sup> July 2023, Monday</b>	10:00 am to 10:30 am	<b>Inauguration</b>	
	10:30 am to 12:30 pm	<ul style="list-style-type: none"> <li>Introduction to Data Science</li> <li>Data Science Process</li> <li>Motivation to use Data Science Technique</li> <li>Overview of Data Preparation</li> </ul>	<b>Ms. Vijaya Padmadas</b>
	12:30 pm to 1:15 pm	<b>Lunch Break</b>	
	1:15 pm to 3:15 pm	Descriptive Statistic: <ul style="list-style-type: none"> <li>Univariate Exploration</li> </ul>	<b>Dr. Archana Patankar</b>
	3:15 pm to 3:30 pm	<b>Tea Break</b>	
	3:30 pm to 4:30 pm	Descriptive Statistic: <ul style="list-style-type: none"> <li>Multivariate Exploration</li> </ul>	<b>Dr. Archana Patankar</b>
<b>DAY-2</b>			
<b>11<sup>th</sup> July 2023, Tuesday</b>	10:00 am to 12:30 pm	<b>Inferential Statistics</b> Overview of Various forms of distributions: Normal, Poisson, Test Hypothesis.	<b>Ms. Uttara Athawale</b>
	12:30 pm to 1:15 pm	<b>Lunch Break</b>	
	1:15 pm to 3:15 pm	Central limit theorem, Confidence Interval, Z-test, t-test	<b>Ms. Uttara Athawale</b>
	3:15 pm to 3:30 pm	<b>Tea Break</b>	
	3:30 pm to 4:30 pm	Type-I, Type-II Errors, ANOVA	<b>Ms. Uttara Athawale</b>

**THADOMAL SHAHANI ENGINEERING COLLEGE**

Department of Computer Engineering

DAY-3			
<b>12<sup>th</sup> July 2023, Wednesday</b>	<b>10:00 am to 12:30 pm</b>	<b>Methodology:</b> Overview of model building, Cross Validation, K-fold cross validation, leave-1 out, Bootstrapping	<b>Dr. Bhushan Jadhav</b>
	<b>12:30 pm to 1:15 pm</b>	<b>Lunch Break</b>	
	<b>1:15 pm to 3:15 pm</b>	<b>Data Visualization:</b> <ul style="list-style-type: none"> <li>Univariate Visualization: Histogram, Quartile, Distribution Chart</li> </ul>	<b>Dr. Bhushan Jadhav</b>
	<b>3:15 pm to 3:30 pm</b>	<b>Tea Break</b>	
	<b>3:30 pm to 4:30 pm</b>	<b>Data Visualization:</b> <ul style="list-style-type: none"> <li>Multivariate Visualization: Scatter Plot, Scatter Matrix, Bubble chart, Density Chart</li> <li>Roadmap for Data Exploration</li> </ul>	<b>Dr. Bhushan Jadhav</b>
DAY-4			
<b>13<sup>th</sup> July 2023, Thursday</b>	<b>10:00 am to 12:30 pm</b>	<b>Anomaly Detection:</b> <ul style="list-style-type: none"> <li>Outliers, Causes of Outliers, Anomaly detection techniques, Outlier Detection using Statistics</li> </ul>	<b>Mr. Hriday Purohit</b>
	<b>12:30 pm to 1:15 pm</b>	<b>Lunch Break</b>	
	<b>1:15 pm to 3:15 pm</b>	<b>Anomaly Detection:</b> <ul style="list-style-type: none"> <li>Outlier Detection using Distance based method</li> </ul>	<b>Mr. Hriday Purohit</b>
	<b>3:15 pm to 3:30 pm</b>	<b>Tea Break</b>	
	<b>3:30 pm to 4:30 pm</b>	<b>Anomaly Detection:</b> <ul style="list-style-type: none"> <li>Outlier detection using density-based methods, SMOTE</li> </ul>	<b>Mr. Hriday Purohit</b>
DAY-5			
<b>14<sup>th</sup> July 2023, Friday</b>	<b>10:00 am to 12:30 pm</b>	<b>Applications of Data Science :</b> <ul style="list-style-type: none"> <li>Predictive Modeling</li> </ul>	<b>Dr. Darshan Ingle</b>
	<b>12:30 pm to 1:15 pm</b>	<b>Lunch Break</b>	
	<b>1:15 pm to 3:15 pm</b>	<b>Applications of Data Science :</b> <ul style="list-style-type: none"> <li>Time series forecasting</li> </ul>	<b>Dr. Darshan Ingle</b>
	<b>3:15 pm to 3:30 pm</b>	<b>Tea Break</b>	
	<b>3:30 pm to 4:30 pm</b>	<b>Applications of Data Science :</b> <ul style="list-style-type: none"> <li>Time series forecasting – Case Study</li> </ul>	<b>Dr. Darshan Ingle</b>

**THADOMAL SHAHANI ENGINEERING COLLEGE**

Department of Computer Engineering

<b>Day-6</b>			
<b>15<sup>th</sup> July 2023, Saturday</b>	<b>10:00 am to 12:30 pm</b>	<b>Time Series Forecasting : Smoothing Methods</b>	<b>Ms. Uttara Athawale</b>
	<b>12:30 pm to 1:15 pm</b>	<b>Lunch Break</b>	
	<b>1:15 pm to 3:15 pm</b>	<b>Time Series Forecasting : Performance Evaluation</b>	<b>Ms. Uttara Athawale</b>
	<b>3:15 pm to 3:30 pm</b>	<b>Tea Break</b>	
	<b>3:30 pm to 4:30 pm</b>	<b>Evaluation Test</b>	
	<b>4:30 pm to 5:00 pm</b>	<b>Valedictory and Vote of Thanks</b>	



**Thadomal Shahani Engineering College**  
**Computer Engineering Department**

**One Week Value Added Course on**

***APPLIED STATISTICS AND SOFTWARE TOOLS FOR DATA SCIENCE***

**Date: 10th July to 15th July 2023**

<b>Name of the Student</b>	<b>Class</b>	<b>Roll No</b>	<b>Email ID</b>
Aakash Kulthia	TE	2104096	askulthia@gmail
Adil Shaikh	BE	2003159	adil786shaikh47@gmail.com
Amit Naval Gupta	TE	2104055	amitgupta00102@gmail.com
Ayush Bhanushali	TE	2104018	ayushbhanushali2011@gmail.com
Chaitanya Kakade	TE	2104076	kakadechaitanya77@gmail.com
Chetana Bhojwani	TE	2104021	Bhojwanichetana@gmail.com
Darshan lasi	BE	2003100	darshanlasi123@gmail.com
Dev Khatanhar	TE	2104089	dvkhatanhar@gmail.com
Dhanesh Chainani	TE	2104025	dhaneshchainani@gmail.com
Divy Thakkar	BE	2003177	divythakkar2002@gmail.com
HARSH MAKHIJA	BE	2003103	harshmakhija421@gmail.com
Harshnandan Trivedi	SE	2104181	ntrivedi542@gmail.com
Himanshi Vyas	TE	2104187	himanshidvyas@gmail.com
Jeet Rane	BE	2003202	jeetrane2002rj@gmail.com
Kaveri Solat	TE	2104170	solatkaveri@gmail.com
Kingrani Simran Dinesh	TE	2104092	kingranisimi20@gmail.com
Krishna Punjabi	TE	2104140	krishnapunjabi.kp@gmail.com
Marc Alexander George	TE	2104046	marc.alex.george@gmail.com
Mihir Umrotkar	BE	2003183	mihirumrotkar93@gmail.com
Namrata vaswani	BE	2003186	namratavaswani0@gmail.com
Nidhi Kadam	TE	2104073	nidhikadam68@gmail.com
Niyati Savant	TE	2104156	savantniyati@gmail.com
Pooja Gawade	TE	2104044	gawadepooja729@gmail.com
Rashi chellani	TE	2104031	rashichellani960@gmail.com
Sahil Khatri	BE	2003092	sahilk0409@gmail.com
Shalvi Marudkar	BE	2003107	shalvimarudkar27@gmail.com
Sheryl Fernandes	TE	2104040	fernandessheryl11@gmail.com

Shruti Ghagare	TE	2104047	shrutighagare605@gmail.com
Shruti Kataria	TE	2104153	shruti.tsec@gmail.com
Somya Barwa	TE	2104014	goushala1@gmail.com
Vishal kaira	TE	2104075	Kairavishal37@gmail.com
Yash Motwani	TE	2104120	yashmotwani2003@gmail.com
Yash Vaskar	BE	2003185	yashvaskar7112002@gmail.com
Pratik Kithani	TE	2003094	Pratikkithani3112@gmail.com

# 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

***Certificate of Participation***

This is to certify that **NIYATI SAVANT** has attended the workshop on **“Applied Statistics and Software Tools for Data Science”** held from 10<sup>th</sup> July 2023 to 15<sup>th</sup> July 2023 under the **VALUE ADDED COURSE** organized by Computer Engineering Department of Thadomal Shahani Engineering College, Bandra, Mumbai.



**Mr. Vaibhav Ambhire**  
Assistant Professor  
Coordinator



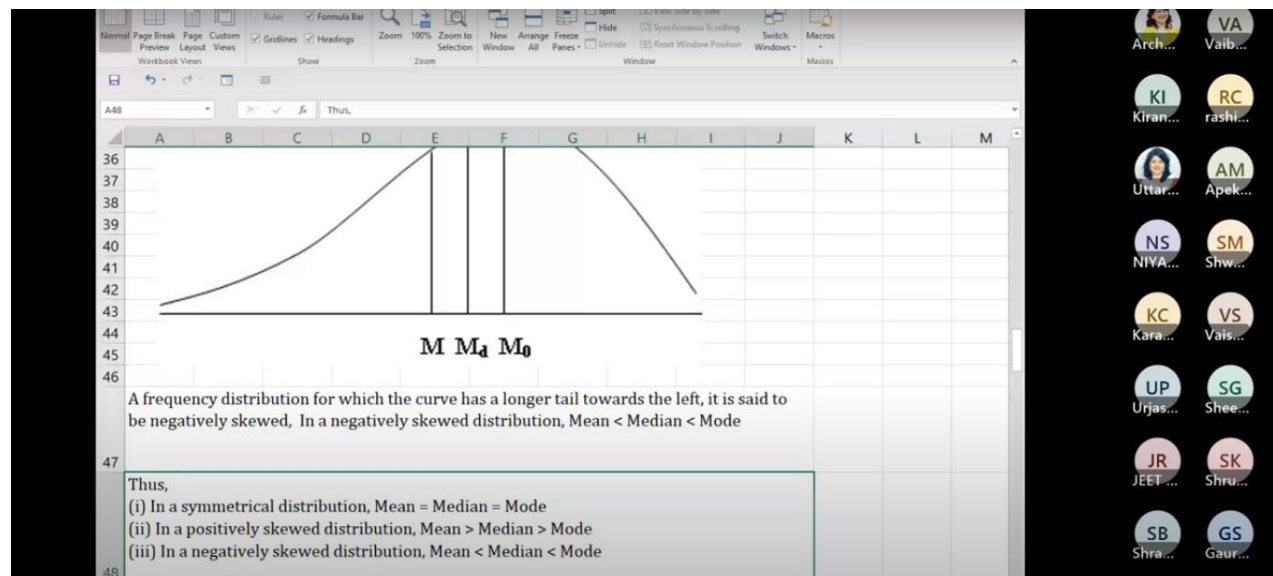
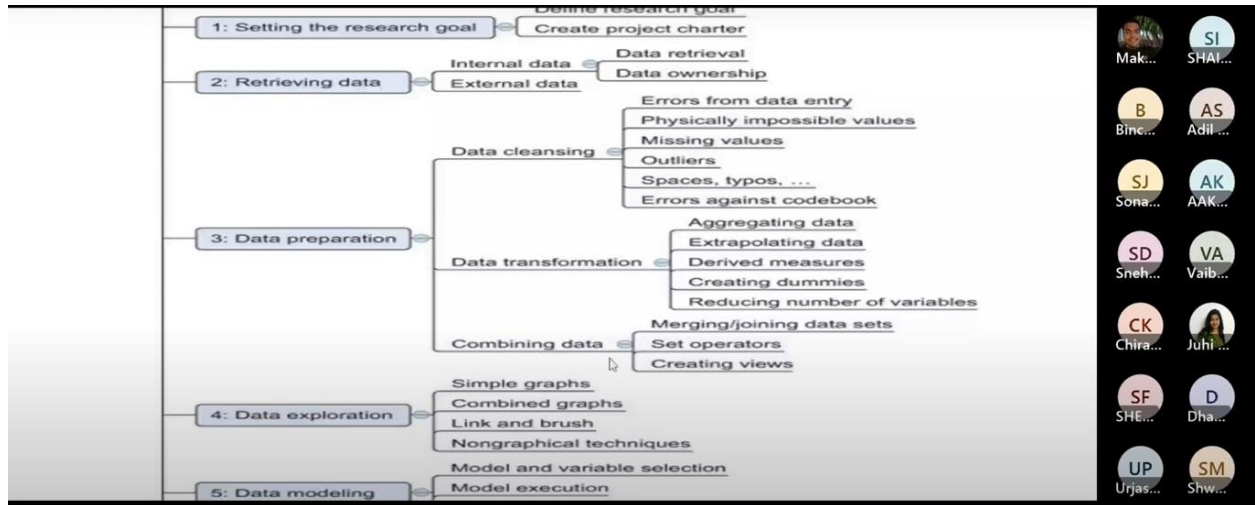
**Ms. Sonali Jadhav**  
Assistant Professor  
Coordinator



**Dr. Tanuja Sarode**  
HoD – Computer Engg. Dept.  
Co-Convenor



**Dr. G. T. Thampi**  
Principal, TSEC  
Convenor





# Training models

Dr. Darshan Ingle (Guest)

Dr. Darshan Ingle ...

- SJ Sona...
- JR JEET...
- MB Mee...
- Yash ...
- See...
- VK VISH...
- DK Dev...
- VA Vaib...
- MG MAR...
- SK Shru...
- SD Salo...
- +35

Geetanjali Kalme (Guest)

Archana Patankar

Parul Jain

Shilpa Ingoley

Sonali Jadhav

Makhija Harsh

Shradha Birje


Kiran Israni

- DL Dars...
- SB SOM...
- Nam...
- VA Vaib...
- SI SHAI...
- DC Dha...
- AK AMA...
- KR KAK...
- RC RAS...
- DB DHE...
- TL THA...
- VB VAIS...
- AN AMI...
- SK Shru...
- AK AAK...
- Juhi ...
- SK Sahil...
- +22


Beautiful.ai | Hands-on: Python - Collaboration

beautiful.ai/player/NZPPrzyd0p0th8HkYp2h1


## Understanding Causes of Outliers



**Data entry errors**  
Errors made when entering data into a system, such as typos or incorrect values



**Sampling errors**  
Errors made when selecting a sample from a population, such as bias or incorrect sample size



**Natural variations**  
Variations in data due to natural causes, such as weather or seasonal changes

Outliers can be caused by a variety of factors, including data entry errors, sampling errors, and natural variations.

DK Dev ... JZ Jaya ...

RM Resh... VS Vais...

SB Shra... Nab...

UP Urjas... HP Hrid...

VA Vaib... SD sneh...

See... GK Geet...

SJ Sona... KP KRIS...

B Binc... AN AMI...

Juhi ... +32


Friday Purohit (Guest)

teams.microsoft.com/\_/modern-calling

Microsoft Teams | Search

32:23

Chat People Raise React View Q&A Apps More Camera Mic Share Leave



Unmute (Ctrl+Shift+M)

Makhija Ha... SB SOMYA BA...

Shradha Bir... SB Sonali Jadh...

Parul Jain... SJ Shilpa Ingo...

AM 47

ALI MEHTAB Participants



**THADOMAL SHAHANI ENGINEERING COLLEGE**

**TSEC FE INDUCTION AND MENTORSHIP PROGRAM**

**2023-2024**

**Co-ordinator: Dr. Mudita Dixit**

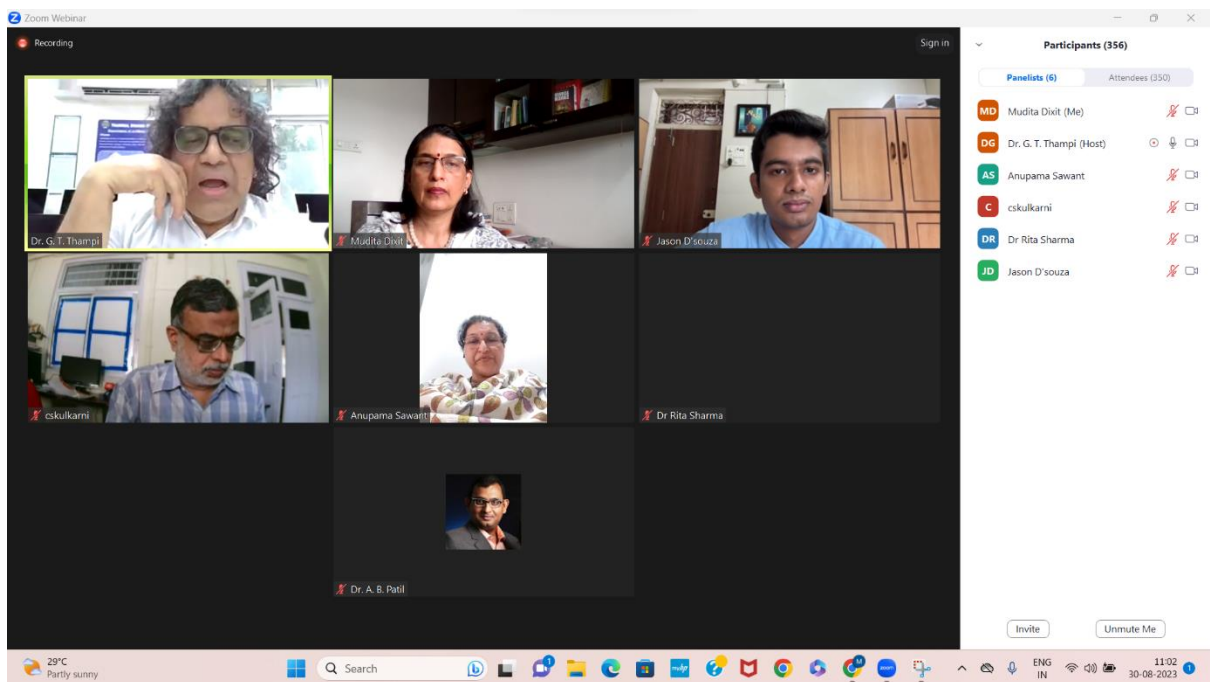
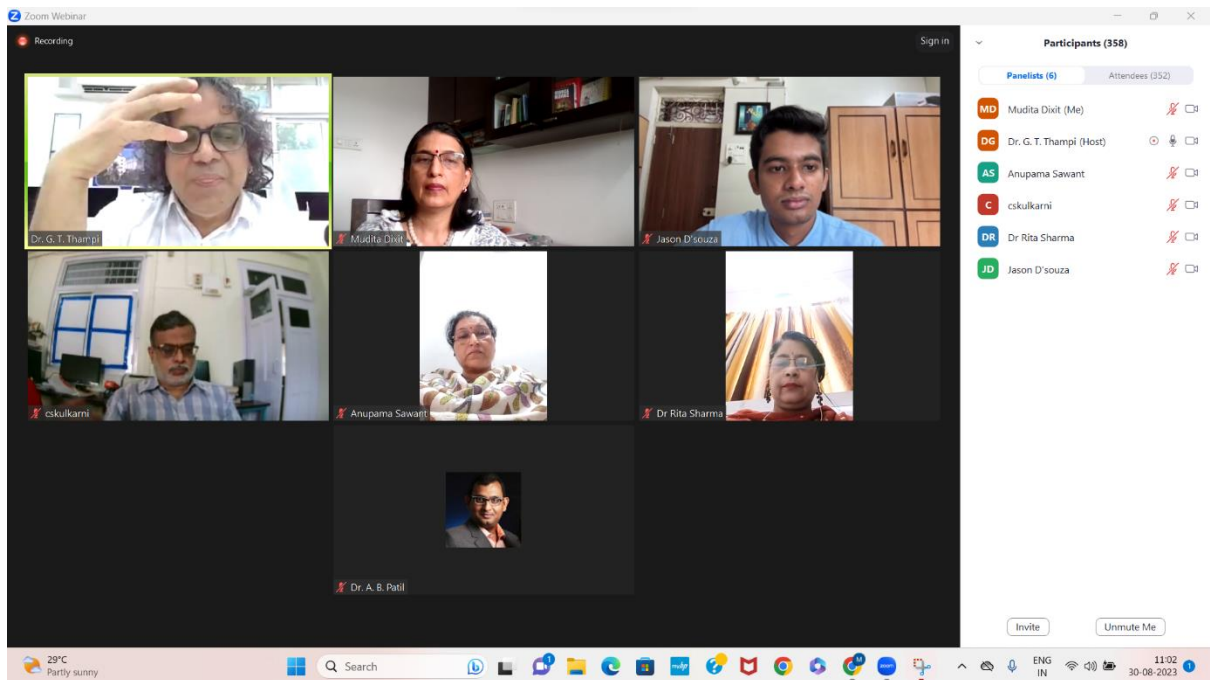
## List of events conducted

	Year	Title of Activity
	29/08/2023 4.00-6.00 PM	Selection of class representative by election
1	30/8/23 10.30AM to 12.30 PM	Induction with the principal, First year Co-Ordinator (online on zoom)
2	30/8/23 onwards multiple sessions	Session by counsellor Ms Juhi Rai on stress management, Time management (multiple sessions)
3	14/09/23 onwards multiple sessions	Sessions with counsellor Roshan Mansukhani (multiple sessions)
4	20/10/2023 1:30 to 3.00 PM	Inspirational talk by entrepreneurs
5	23/10/23 11.00 to 4.00 PM	Internship awareness drive in collaboration with IIT Kharagpur
6	28/10/2023 5.00-7.00 PM	Induction to various societies/committees of TSEC
7	31/10/2023 5.30-7.00 PM	Induction with controller of the examinations
8	09/11/2023	Yoga and meditation session with Ms. Nihar
9	30 Nov	Term end

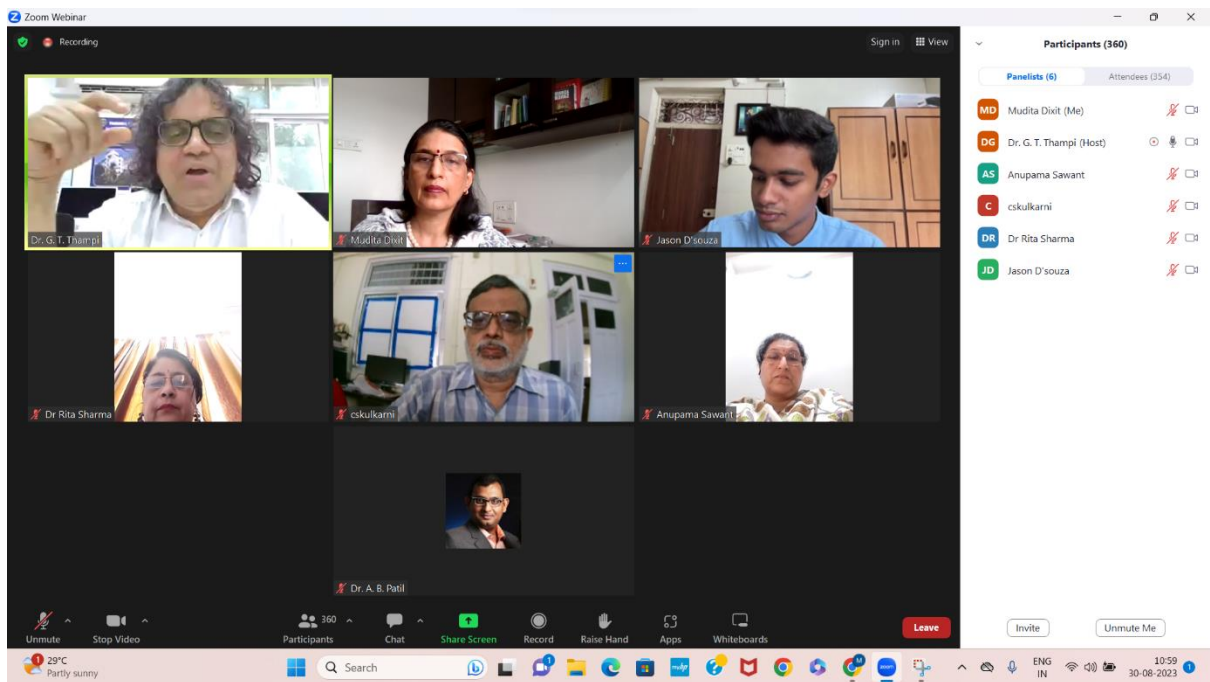
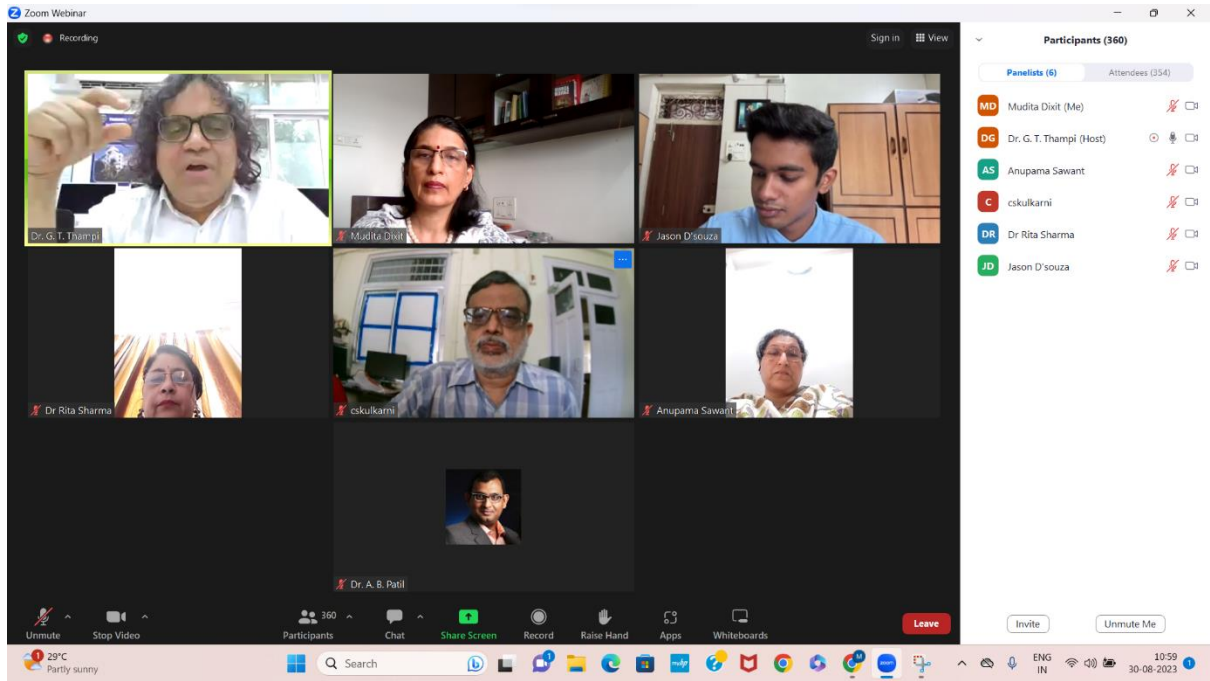
LINKS FOR ATTENDANCE & SNAPS ARE GIVEN IN THE REPORT

# 1. Induction with principal (online on zoom)

Date: 30-08-2023 4.00 to 6.00 PM







Attendance sheet and photographs are given in the below link

[https://drive.google.com/drive/folders/1ZcCRvoIz-Fej1vORzF1CKQcsy6Ts0oJ?usp=drive\\_link](https://drive.google.com/drive/folders/1ZcCRvoIz-Fej1vORzF1CKQcsy6Ts0oJ?usp=drive_link)

## **2. Session by counsellor Ms Juhi Rai on stress management, Time management, personality development**

**Date:** 30/8/23 onwards

Multiple sessions









Attendance sheet and photographs are given in the below link

<https://drive.google.com/drive/folders/1yCCHYDBJC2tkIPvHopdKnrj53ERU1INX?usp=sharing>

### **3. Sessions with counsellor Mr. Roshan Mansukhani**

**Multiple sessions with each division**

**Date:** 14/09/2023 onwards







Attendance sheet and photographs are given in the below link

<https://drive.google.com/drive/folders/18rJ02zY1f35DPOgpmO0tYD-ZZAqWfK?usp=sharing>



## 4. Inspirational talk by entrepreneurs

Date: 20/10/2023 1:30 to 3.00 PM





Mumbai, Maharashtra, India  
3R7P+HV7, Barrister Hotchand Gopaldas Advani Marg, Khar West, Mumbai, Maharashtra  
400050, India  
Lat 19.063896°  
Long 72.837139°  
20/10/23 01:49 PM GMT +05:30



# MOTIVATIONAL SESSION

BY  
SUCCESSFUL ENTREPRENEUR



**FRIDAY**  
20TH OCTOBER, 2023



**TIME**  
11:30 AM-12:40 PM



**VENUE**  
SEMINAR HALL, OLD BUILDING  
TSEC

**REGISTER NOW!**



SPEAKER  
**JOSHUA SALINS**  
Founder and CEO  
THE HOBBY TRIBE

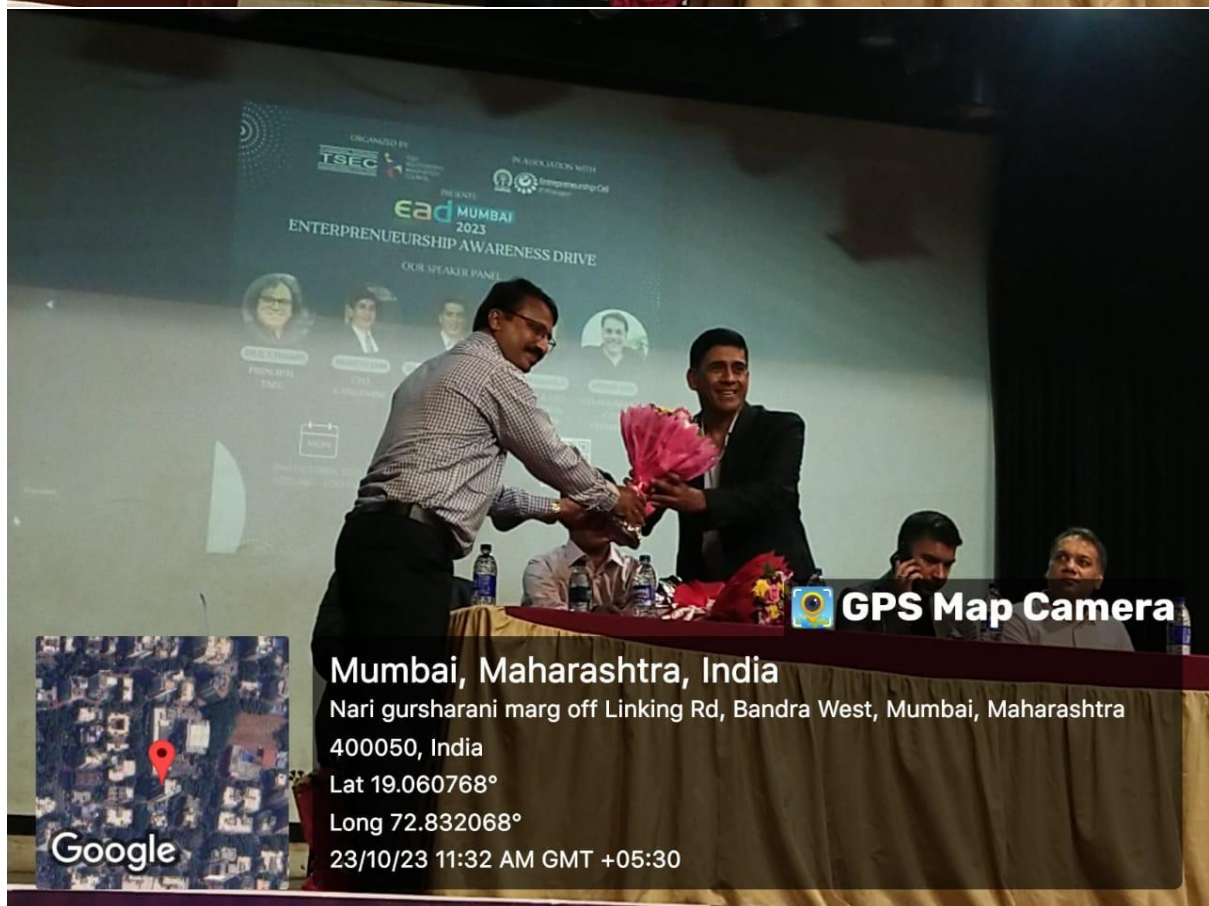
Attendance sheet and photographs are given in the below link

<https://drive.google.com/drive/folders/19AailN8Qu9xSUTIROZFgQLJ0ssMdPCY?usp=sharing>



## 5. Internship awareness drive in collaboration with IIT Kharagpur

Date: 23/10/23 11.00 to 4.00 PM







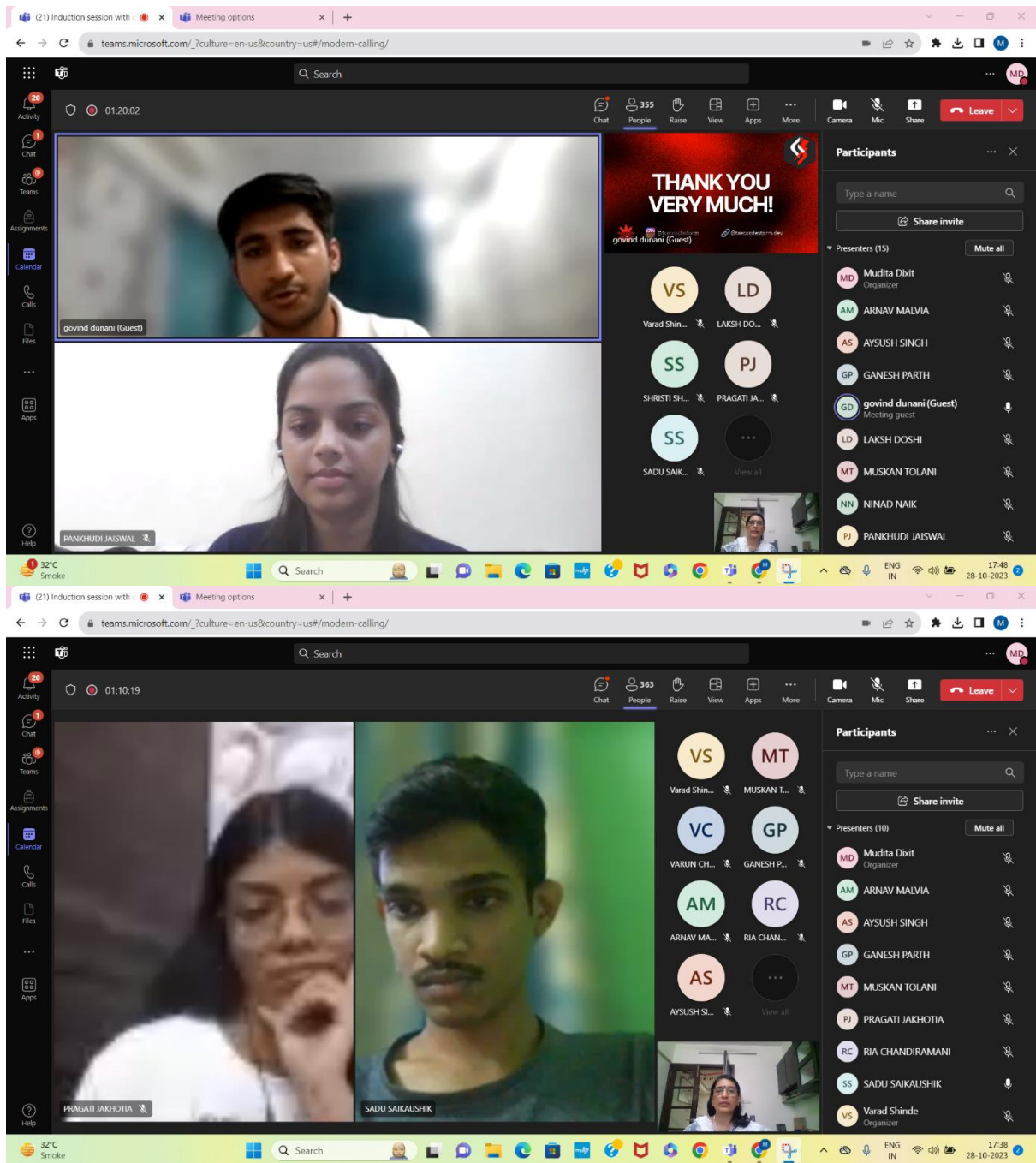
Attendance sheet and photographs are given in the below link

<https://drive.google.com/drive/folders/1AGMrUgncpuyVov2VfJ6AOgllv2Jf5iSu?usp=sharing>

# 7. Induction to various societies/committees of TSEC

Date: 28/10/2023 5.00-7.00 PM

The image shows two screenshots of a Microsoft Teams meeting. The top screenshot displays a grid of nine participant avatars with initials: T (Tanish Raigandhi), AM (Arnav Malviya), VS (Varad Shinde), A (Aparameya Acharya), RC (Ria Chandiramani), K (Kanhaiyalal Priyani), MT (Muskan Tolani), P (Parth Gupta), and MI (Meeraj Kanade). A 'View all' button is also visible. The bottom screenshot shows a presentation slide titled 'ELAN' with the text: 'Elan is a three day odd semester technical festival of IETE-TSEC which includes interesting workshops, seminars and lectures wherein technical and non-technical competitions are also conducted.' The slide features a group photo of students and a lightbulb icon with 'IETE' written below it. The meeting interface includes a search bar, navigation icons, and a 'Leave' button.



Attendance sheet and photographs are given in the below link

[https://drive.google.com/drive/folders/1C3AdPcNm\\_wGC8pK8fAbrO9tECy3WQQi7?usp=drive\\_link](https://drive.google.com/drive/folders/1C3AdPcNm_wGC8pK8fAbrO9tECy3WQQi7?usp=drive_link)

## 8. Induction with controller of the examinations

Date: 31/10/2023 5.30-7.00 PM



20:17

Participate

Type a name

Share invite

Presenters (1)

Tasheem Mirza  
Organizer

Attendees (197)

65 yanshunan y... (Guest)  
Meeting guest

AAYUSH\_RAUL\_35B\_AIDS

ABBAS\_SARIM\_42B\_AIDS

18:19  
31-10-2023

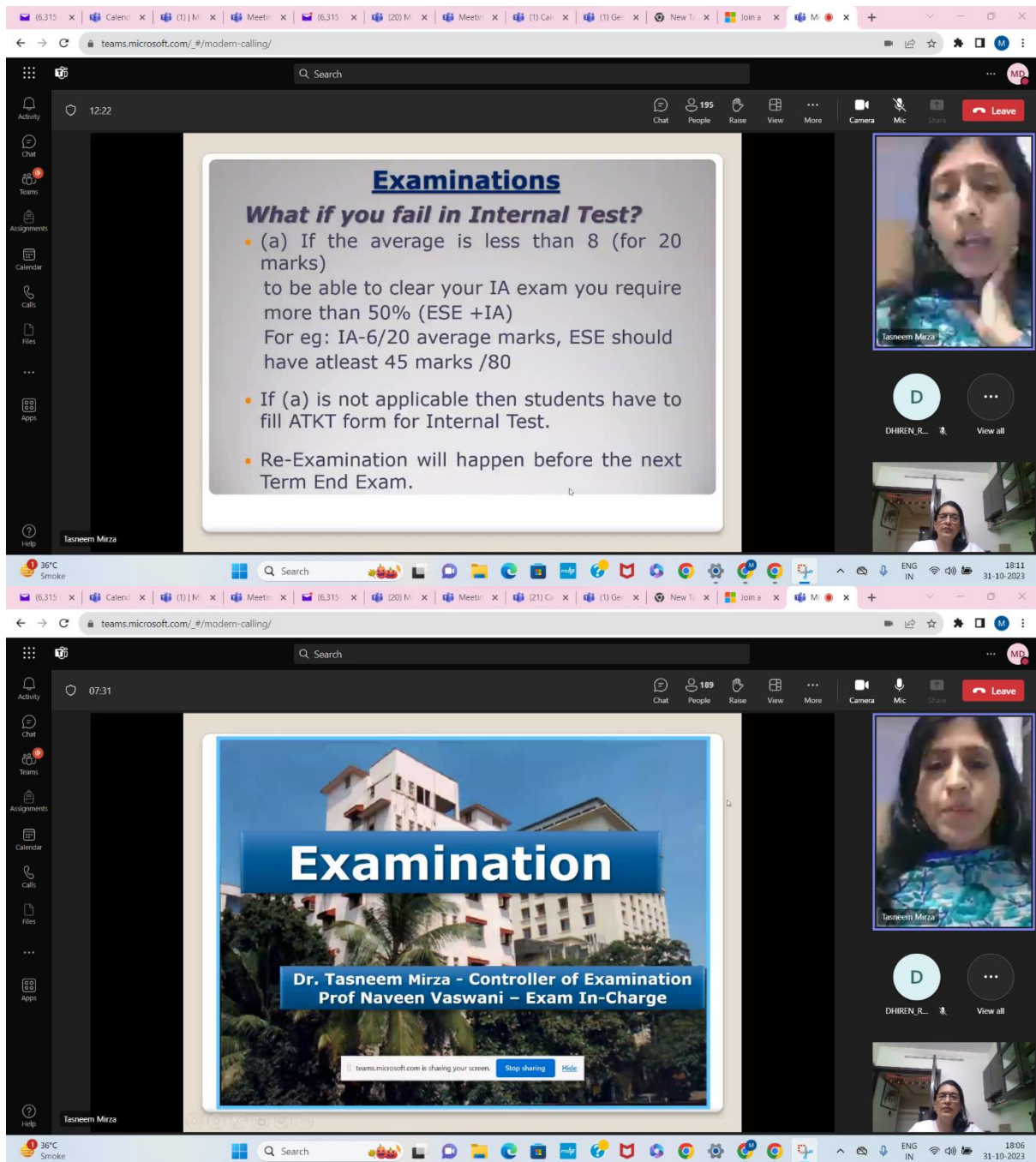
14:25

## Examinations

**Allowed to Keep Terms (ATKT):**

- A student shall be allowed to keep term for Sem II irrespective of grades obtained in each course of Sem I.

18:13  
31-10-2023

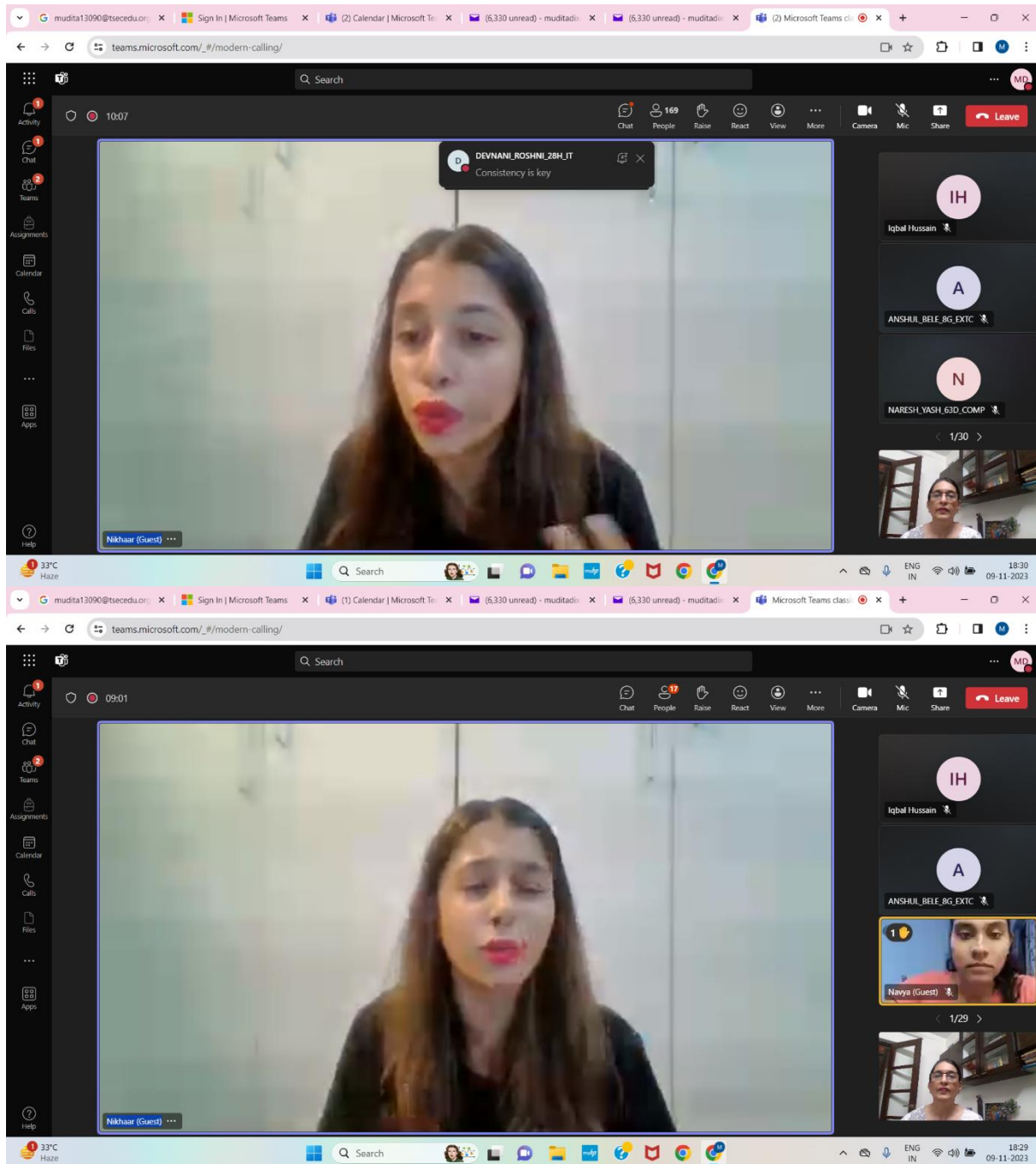


Attendance and photographs are given in the link below

<https://drive.google.com/drive/folders/1owCsyb4BDGaKrbrO8tW2Exl2W2RVO3Sh?usp=sharing>

## 9.Yoga and meditation session with Ms. Nihar

Date: 09/11/2023 5 to 6.30 PM



Attendance and photographs are given in the link below

[https://drive.google.com/drive/folders/1dfHmK1\\_HJWkWd4KInZZseZdmYGH1d-hB?usp=drive\\_link](https://drive.google.com/drive/folders/1dfHmK1_HJWkWd4KInZZseZdmYGH1d-hB?usp=drive_link)





# THADOMAL SHAHANI ENGINEERING COLLEGE

## CERTIFICATE

This is to certify that Mr./Ms. Moheet Dialani has successfully completed **Induction Program** on various topics like Yoga, Entrepreneurship, Personality & Skill Development, Financial Planning, Stress Management & Time Management for the year 2023-2024 organized by the college.



Dr. Mudita Dixit,  
Induction Coordinator



Dr. G.T. Thampi  
Principal

# THADOMAL SHAHANI ENGINEERING COLLEGE

## CERTIFICATE

This is to certify that Mr./Ms. Gaurika Udasi has successfully completed **Induction Program** on various topics like Yoga, Entrepreneurship, Personality & Skill Development, Financial Planning, Stress Management & Time Management for the year 2023-2024 organized by the college.



Dr. Mudita Dixit.  
Induction Coordinator



Dr. G.T.Thampi  
Principal

# THADOMAL SHAHANI ENGINEERING COLLEGE

## CERTIFICATE

This is to certify that Mr./Ms. Megha Menghani has successfully completed **Induction Program** on various topics like Yoga, Entrepreneurship, Personality & Skill Development, Financial Planning, Stress Management & Time Management for the year 2023-2024 organized by the college.



Dr. Mudita Dixit.  
Induction Coordinator



Dr. G.T.Thampi  
Principal

# THADOMAL SHAHANI ENGINEERING COLLEGE

## CERTIFICATE

This is to certify that <sup>✓</sup>Mr./Ms. Hundaanah Shah has successfully completed **Induction Program** on various topics like Yoga, Entrepreneurship, Personality & Skill Development, Financial Planning, Stress Management & Time Management for the year 2023-2024 organized by the college.



Dr. Mudita Dixit.  
Induction Coordinator



Dr. G.T.Thampi  
Principal

# THADOMAL SHAHANI ENGINEERING COLLEGE

## CERTIFICATE

This is to certify that Mr./Ms. Pratna Vyas has successfully completed **Induction Program** on various topics like Yoga, Entrepreneurship, Personality & Skill Development, Financial Planning, Stress Management & Time Management for the year 2023-2024 organized by the college.



Dr. Mudita Dixit.  
Induction Coordinator



Dr. G.T.Thampi  
Principal





# MS EXCEL AND VBA FOR CHEMICAL ENGINEERS

## Online Certification Course

**MR. ADITYA GANESH**

Joint Ph.D. student

IITB-Monash Research Academy



**8TH JUNE 2024**

**11:00A.M - 3:00P.M**

**Duration: 4 weeks; Sat-Sun**

**Convener :**

**Dr. G.T. Thampi**  
**Principal**

**Co-Convener :**

**Dr. Nita Mehta**  
**HoD (Chem)**

**Co-ordinator:**

**Prof. Ravindra Joshi**









C1750142	P	P							2	25
Sanyukta	P	P							2	25
C1550140	P	P							2	25
Swapnil R.	P	P							2	25
KRUPA CHITRODA	P	P							2	25
Siddhi Vora	P	P							2	25
BASIT MAHISKAR	P	P	P		P	P	P		6	75
Shrinivas Tamgole	P								1	14.2857
C250127	P		P	P		P			4	57.1428
C3650161			P	P					2	28.5714
GHARGE DEVIKA			P	P	P	P	P	P	6	85.7142
SANKHE PARTH			P	P	P	P	P	P	6	85.7142
Abdul Rehman			P						1	14.2857
Riya Shukla			P						1	14.2857
ANSARI ASAD			P						1	14.2857
MAHENDRA JEET			P						1	14.2857
SIA SHETTY			P	P					2	28.5714

C4650170			P							1	14.2857
Vaidehi Kamtekar			P							1	14.2857
sakshi tandel			P							1	14.2857
samarth kesharwani			P							1	14.2857
Sania Sayed			P							1	14.2857
Aayush Bharucha			P							1	14.2857
KASHISH AGARWAL				P						1	14.2857
Vridhi Varliant				P	P					2	28.5714
C1050135				P						1	14.2857
Atharva Gidde					P					1	14.2857
Ritika Yadav						P				1	14.2857

# Chemical Engineering Department, TSEC

## Report on “MS Excel and VBA for Chemical Engineers:Day-1”

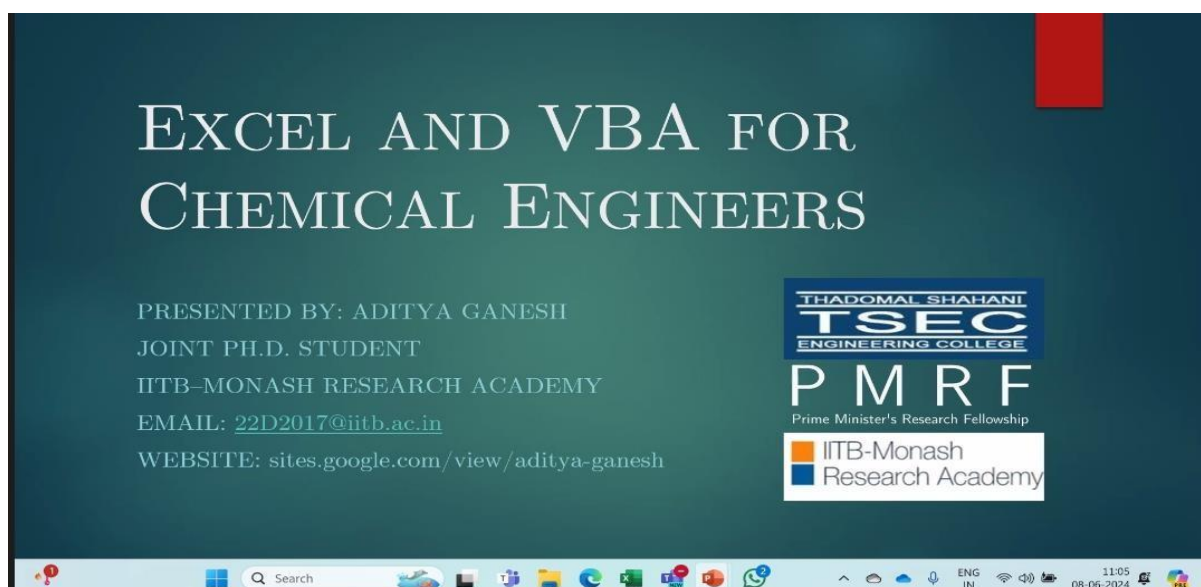
**Venue:** Microsoft Teams

**Day:** 8<sup>th</sup> June, 2024

**Time:** 11.00 A.M.- 3.00 P.M.

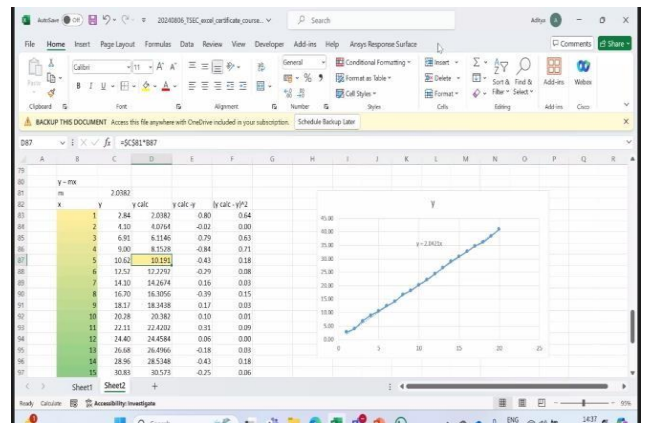
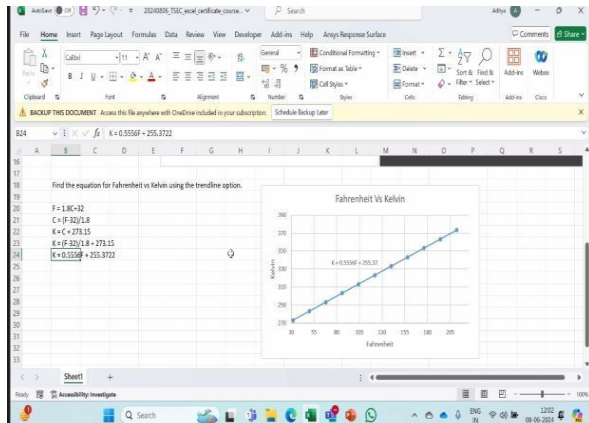
**Objective:** To educate students about how to use MS Excel for advance calculations required in Chemical Engineering

A workshop is being conducted on “MS Excel and VBA for Chemical Engineers” by Mr. Aditya Ganesh. The workshop is organized by the Chemical Engineering Department of TSEC. The duration of the workshop will be for 4 weeks on Saturday and Sunday.



The main purpose of organizing such a workshop is so as to make students learn how to use excel for advance chemical engineering calculations and also learning Visual Basics. Mr. Aditya Ganesh being an alumni of TSEC has done his masters from IIT Jodhpur and is currently pursuing his Ph.D. from IIT B-Monash Research Academy.

The workshop started by speaker explaining to students what are the benefits and uses of excel in their career. Further, the speaker explained the basics of excel and how the plotting of graphs by converting the values of Celsius to Degrees to Fahrenheit takes place. Then, he taught the students how an equation can be formed where the calculations of concentration and time can be done, its plotting and how a regression line can be added to it. Finding the roots of the equation, how Goalseek and Solver can be used for all these methods was shown by the speaker.



After the break, the speaker covered some important areas like how we can assign a matrix in excel and how the multiplication of two matrices takes place. On each of the above topics, specific sums were given so as to give students the idea of how exactly excel works and they would also get well-versed to it.

The first day of workshop ended on a high note where students asked their queries to the speaker where the queries of the and they were answered thoroughly by the speaker.

# Chemical Engineering Department, TSEC

## Report on “MS Excel and VBA for Chemical Engineers:Day-2”

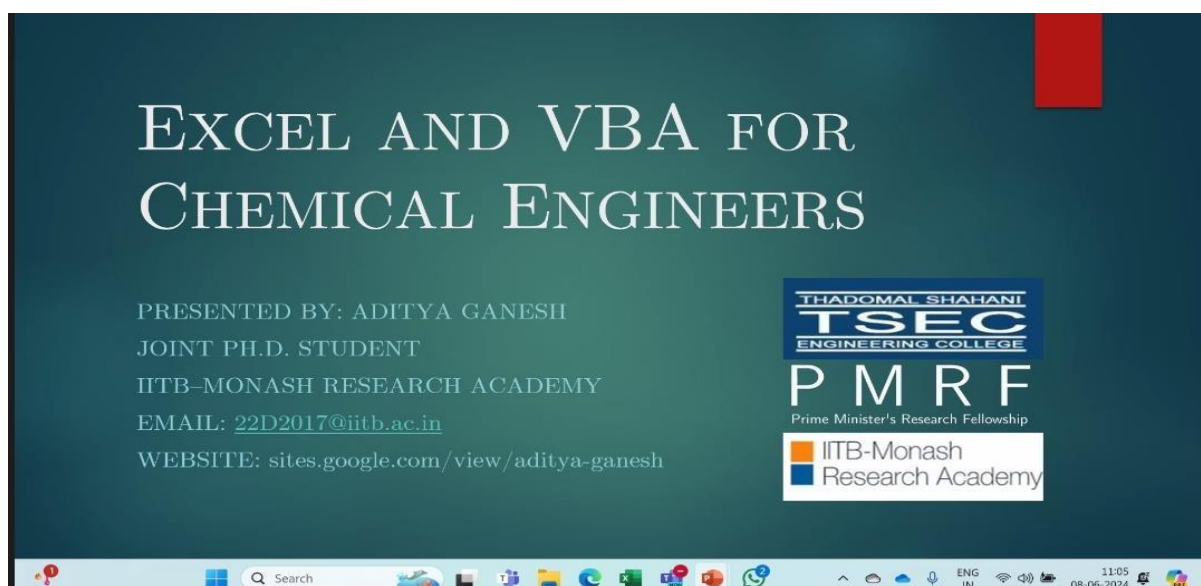
**Venue:** Microsoft Teams

**Day:** 9<sup>th</sup> June, 2024

**Time:** 11.00 A.M.- 3.00 P.M.

**Objective:** To educate students about how to use MS Excel for advance calculations required in Chemical Engineering

A workshop is being conducted on “MS Excel and VBA for Chemical Engineers” by Mr. Aditya Ganesh. The workshop is organized by the Chemical Engineering Department of TSEC. The duration of the workshop will be for 4 weeks on Saturday and Sunday.



The image shows a presentation slide with a dark blue background and a red vertical bar on the right. The title "EXCEL AND VBA FOR CHEMICAL ENGINEERS" is written in large, white, serif capital letters. Below the title, the presenter's information is listed in smaller white text: "PRESENTED BY: ADITYA GANESH", "JOINT PH.D. STUDENT", "IITB-MONASH RESEARCH ACADEMY", "EMAIL: [22D2017@iitb.ac.in](mailto:22D2017@iitb.ac.in)", and "WEBSITE: [sites.google.com/view/aditya-ganesh](https://sites.google.com/view/aditya-ganesh)". On the right side, there are two logos: the top one is for "THADOMAL SHAHANI TSEC ENGINEERING COLLEGE" and the bottom one is for "P M R F Prime Minister's Research Fellowship IITB-Monash Research Academy". At the bottom of the slide, a Windows taskbar is visible, showing the search bar, taskbar icons, and system tray with the time 11:05 and date 08-06-2024.

The main purpose of organizing such a workshop is so as to make students learn how to use excel for advance chemical engineering calculations and also learning Visual Basics. Mr. Aditya Ganesh being an alumni of TSEC has done his masters from IIT Jodhpur and is currently pursuing his Ph.D. from IIT B-Monash Research Academy.



(L) A mass balance on component A leads to

$$V \frac{dC_A}{dt} = -F C_A$$

ical solution is

$$C_A = C_{A0} e^{-t/\tau}$$

ations for the fourth-order RK method are shown below

$$k_1 = dt f(C_{A_n}, t_n)$$

$$k_2 = dt f(C_{A_n} + \frac{k_1}{2}, t_n + \frac{dt}{2})$$

$$k_3 = dt f(C_{A_n} + \frac{k_2}{2}, t_n + \frac{dt}{2})$$

$$k_4 = dt f(C_{A_n} + k_3, t_n + dt)$$

$$C_{A_{n+1}} = C_{A_n} + \frac{1}{6}(k_1 + 2k_2 + 2k_3 + k_4)$$

1 min and  $\tau = V/F = 0.5$  min. Compare with the analytical solution.

Time	CA	k1	k2	k3	k4	CA (analytical)
0	1					1
0.1	1	0.81873				0.81873
0.2	1	0.7032				0.7032
0.3	1	0.5881				0.5881
0.4	1	0.4493				0.4493
0.5	1	0.3078				0.3078
0.6	1	0.2019				0.2019
0.7	1	0.1466				0.1466
0.8	1	0.1059				0.1059
0.9	1	0.0763				0.0763
1	1	0.0534				0.0534

Time	CA	k1	k2	k3	k4	CA (analytical)
0	1					1
0.1	0.81873	0.81873	0.7032	0.5881	0.4493	0.81873
0.2	0.7032	0.7032	0.5881	0.4493	0.3078	0.7032
0.3	0.5881	0.5881	0.4493	0.3078	0.2019	0.5881
0.4	0.4493	0.4493	0.3078	0.2019	0.1466	0.4493
0.5	0.3078	0.3078	0.2019	0.1466	0.1059	0.3078
0.6	0.2019	0.2019	0.1466	0.1059	0.0763	0.2019
0.7	0.1466	0.1466	0.1059	0.0763	0.0534	0.1466
0.8	0.1059	0.1059	0.0763	0.0534	0.0383	0.1059
0.9	0.0763	0.0763	0.0534	0.0383	0.0277	0.0763
1	0.0534	0.0534	0.0383	0.0277	0.0201	0.0534

The workshop started by speaker explaining the regression analysis to students wherein a problem statement was given and the required pressure data was being calculated after that residue was made to find out and the required constants data was being calculated. This problem was further solved using Antoine and Claucius-Clapeyron Equations. After this a problem on toluene and benzene data was given which was made to solve using matrix.

Temperature (C)	Pressure (mm Hg)	P (calc)	Residual^2
-36.7	1	19.2388	409.6508
-19.6	5	2.58837	57.7352
-11.5	10	6.529563	12.04394
-2.6	20	20.06161	0.003796
7.6	40	42.72889	7.452288
15.4	80	87.11253	51.38811
26.1	100	113.3382	371.8078
42.2	200	218.2093	151.5795
60.6	400	404.3869	15.09889
80.1	760	698.8016	576.2244

$a_3 = 0.000744911$      $a_2 = 0.039448073$      $a_1 = 1.98099$      $a_0 = 24.45936$   
 $P = a_0 + a_1T + a_2T^2 + a_3T^3$

Temperature (C)	Pressure (mm Hg)	P (calc)	Residual^2
-36.7	1	3.20039	17.6416
-19.6	5	30.522	30.0011
-11.5	10	14.7652	22.707
-2.6	20	21.978	2.5535
7.6	40	36.1704	14.6662
15.4	80	84.962	75.1395
26.1	100	95.8464	17.2524
42.2	200	201.251	1.56524
60.6	400	407.708	59.4137
80.1	760	756.95	13.2028

$a_3 = 0.000744911$      $a_2 = 0.039448073$      $a_1 = 1.98099$      $a_0 = 24.45936$   
 $P = a_0 + a_1T + a_2T^2 + a_3T^3$

After the break, the speaker covered some important areas like system of non-linear equations wherein the data of Gas-Phase reactions was given and we had to solve the equations using solver. Further, the problems on perfectly stirred tank and heat exchange in series of the tank using RK-4 method was covered.

The second day of workshop ended on a high note where students asked their queries to the speaker where the queries of the and they were answered thoroughly by the speaker.

# Chemical Engineering Department, TSEC

## Report on “MS Excel and VBA for Chemical Engineers:Day-3”

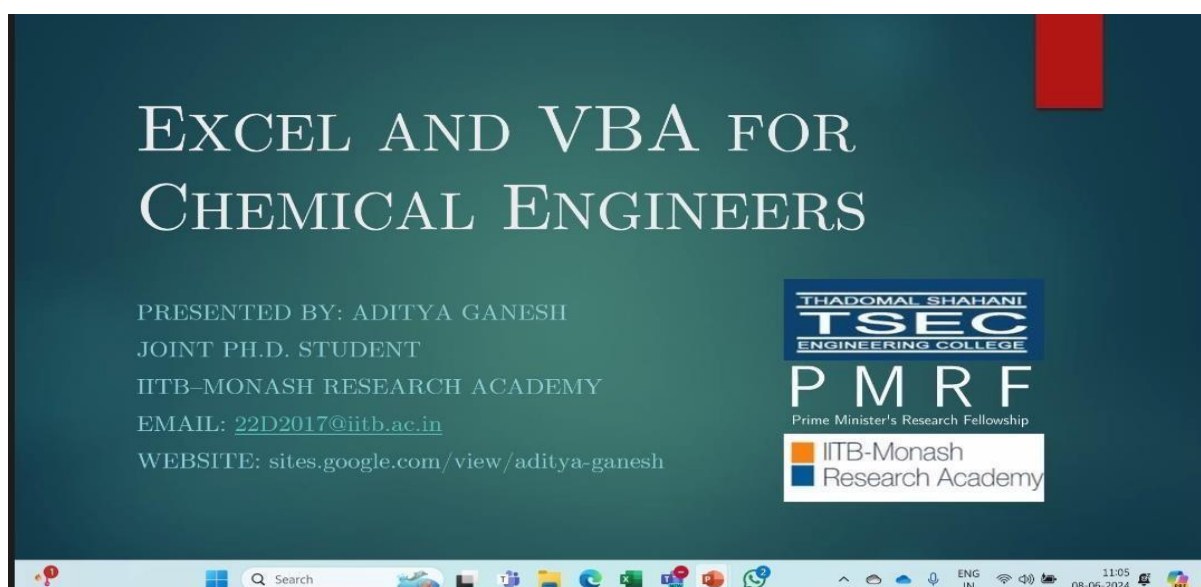
**Venue:** Microsoft Teams

**Day:** 15<sup>th</sup> June, 2024

**Time:** 11.00 A.M.- 3.00 P.M.

**Objective:** To educate students about how to use MS Excel for advance calculations required in Chemical Engineering

A workshop is being conducted on “MS Excel and VBA for Chemical Engineers” by Mr. Aditya Ganesh. The workshop is organized by the Chemical Engineering Department of TSEC. The duration of the workshop will be for 4 weeks on Saturday and Sunday.



The image shows a presentation slide with a dark blue background and white text. The title is "EXCEL AND VBA FOR CHEMICAL ENGINEERS". Below the title, it says "PRESENTED BY: ADITYA GANESH, JOINT PH.D. STUDENT, IITB-MONASH RESEARCH ACADEMY". It also provides an email address "EMAIL: 22D2017@iitb.ac.in" and a website "WEBSITE: sites.google.com/view/aditya-ganesh". On the right side, there are logos for "THADOMAL SHAHANI TSEC ENGINEERING COLLEGE", "P M R F Prime Minister's Research Fellowship", and "IITB-Monash Research Academy". At the bottom, there is a Windows taskbar showing the date as 08-06-2024 and time as 11:05.

The main purpose of organizing such a workshop is so as to make students learn how to use excel for advance chemical engineering calculations and also learning Visual Basics. Mr. Aditya Ganesh being an alumni of TSEC has done his masters from IIT Jodhpur and is currently pursuing his Ph.D. from IIT B-Monash Research Academy.

The workshop started with the speaker by practicing sums and explaining them based on the topic of Material Balance without chemical reactions. The problems based on mixing of solvents and water was covered in the first half of the session. Later the problems on Bypass method (Direct and Indirect method) was taken by the speaker. The Goal seek method was required for recycle system of interconnected tanks without reaction was explained in this context.

The first screenshot shows a spreadsheet with the following data:

Flow	Rate (m <sup>3</sup> /min)	Concentration (mol/m <sup>3</sup> )
Q01	5	10
Q02	1	1
Q11	2	-
Q12	7	-
Q23	8	-
Q33	6	-

The second screenshot shows a PDF document with the following text:

...cycle, and part of the effluent of tank 3 returns to tank 1, at a rate  $Q_{31}$  (m<sup>3</sup>/min) the entire process, the volume of liquid in the three tanks remains constant. ...  
 ... $Q_{23}$  (m<sup>3</sup>/min), and the amount of water that leaves tank 3 is  $Q_{33}$  (m<sup>3</sup>/min).  
 ...  
 ... $Q_{31}$  and  $Q_{33}$  start feeding tanks 1 and 2 with ...  
 ... $Q_{31}$  and  $Q_{33}$  start feeding tanks 1 and 2 with ...  
 ... $Q_{31}$  and  $Q_{33}$  start feeding tanks 1 and 2 with ...

Flow	Rate (m <sup>3</sup> /min)	Units
Q01	5	1
Q02	1	2
Q11	2	7
Q12	7	8
Q23	8	6
Q33	6	m <sup>3</sup> /min

Tank	Unit (mol/min)
1	$Q_{01}C_{01} - Q_{11}C_1 + Q_{31}C_3 = 0$
2	$Q_{02}C_{02} - Q_{21}C_2 + Q_{12}C_1 = 0$
3	$Q_{23}C_2 - Q_{33}C_3 - Q_{31}C_3 = 0$

The third screenshot shows a spreadsheet with a process flow diagram and numerical results:

Flow	Rate (m <sup>3</sup> /min)	Concentration (mol/m <sup>3</sup> )
Q01	5.0	10.0
Q02	1.0	1.0
Q11	2.0	7.0
Q12	7.0	8.0
Q23	8.0	6.0
Q33	6.0	6.0
Q31	2.0	6.0

The next half session of the workshop started with speaker taking some numericals based on overall topics as well as the basics of VBA was taught by the speaker. The speaker brilliantly explained the VBA concepts to student and what were the commands that are used to work using VBA. After that the speaker explained some of the sums which were based on the same concept.

The day of workshop ended on a high note where students asked their queries to the speaker where the queries of the and they were answered thoroughly by the speaker.

# Chemical Engineering Department, TSEC

## Report on “MS Excel and VBA for Chemical Engineers: Day-4”

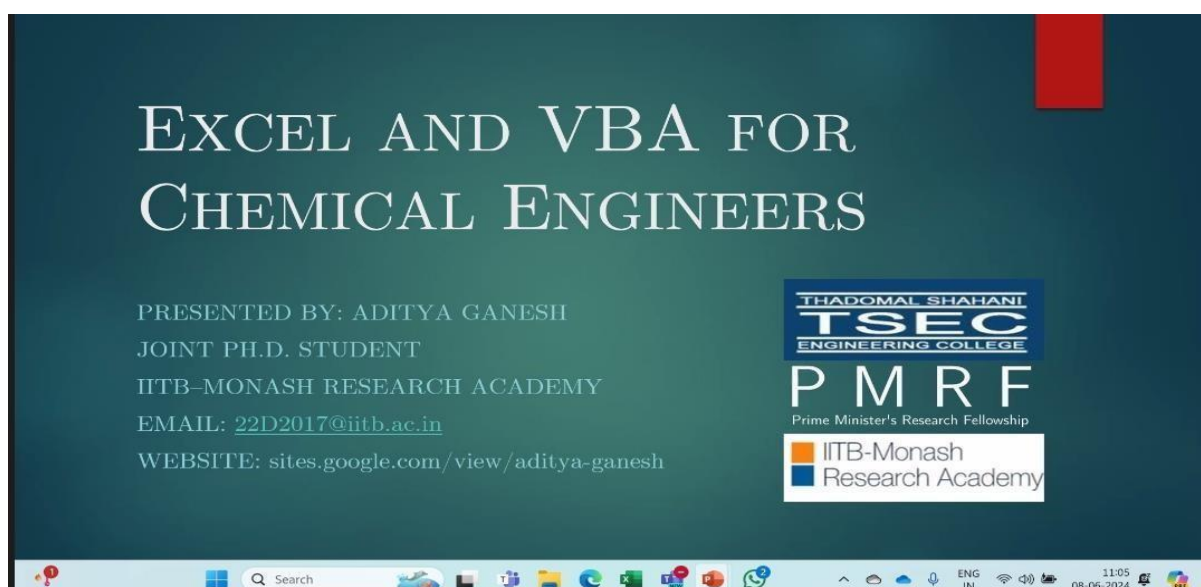
**Venue:** Microsoft Teams

**Day:** 16<sup>th</sup> June, 2024

**Time:** 11.00 A.M.- 3.00 P.M.

**Objective:** To educate students about how to use MS Excel for advance calculations required in Chemical Engineering

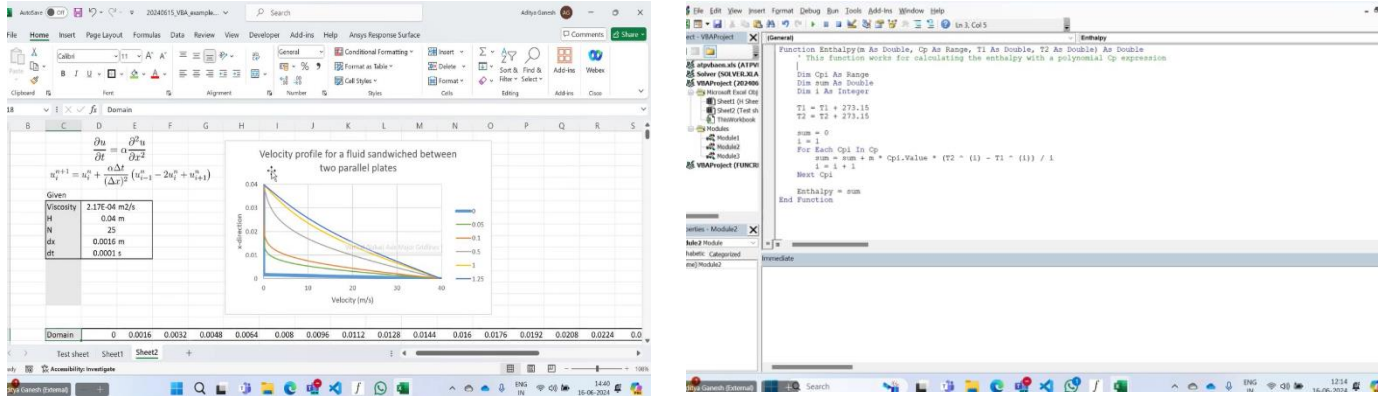
A workshop is being conducted on “MS Excel and VBA for Chemical Engineers” by Mr. Aditya Ganesh. The workshop is organized by the Chemical Engineering Department of TSEC. The duration of the workshop will be for 4 weeks on Saturday and Sunday.



The image shows a presentation slide with a dark blue background and white text. The title "EXCEL AND VBA FOR CHEMICAL ENGINEERS" is prominently displayed at the top. Below the title, the presenter's information is listed: "PRESENTED BY: ADITYA GANESH, JOINT PH.D. STUDENT, IITB-MONASH RESEARCH ACADEMY". Contact details include "EMAIL: [22D2017@iitb.ac.in](mailto:22D2017@iitb.ac.in)" and "WEBSITE: [sites.google.com/view/aditya-ganesh](https://sites.google.com/view/aditya-ganesh)". On the right side, there are logos for "THADOMAL SHAHANI TSEC ENGINEERING COLLEGE" and "P M R F Prime Minister's Research Fellowship". At the bottom right, the "IITB-Monash Research Academy" logo is visible. The slide is shown within a Windows desktop environment, with the taskbar at the bottom displaying various application icons and system information like the date (08-06-2024) and time (11:05).

The main purpose of organizing such a workshop is so as to make students learn how to use excel for advance chemical engineering calculations and also learning Visual Basics. Mr. Aditya Ganesh being an alumni of TSEC has done his masters from IIT Jodhpur and is currently pursuing his Ph.D. from IIT B-Monash Research Academy.

The workshop started with the speaker by practicing sums and explaining them based on the topic of VBA. The speaker explained the normal as well as the integration function to be used in VBA codes. Further the concept of Theoretical Flame Temperature was explained by the speaker in which the energy and material balance using solver was covered. Later the sums based on this topic were covered. Lastly the sum based on using 1d diffusion temperature was covered wherein four separate graph plotting was taught by the speaker.



The day of workshop ended on a high note where students asked their queries to the speaker where the queries of the and they were answered thoroughly by the speaker.



# Chemical Engineering Department, TSEC

## Report on “MS Excel and VBA for Chemical Engineers:Day-5”

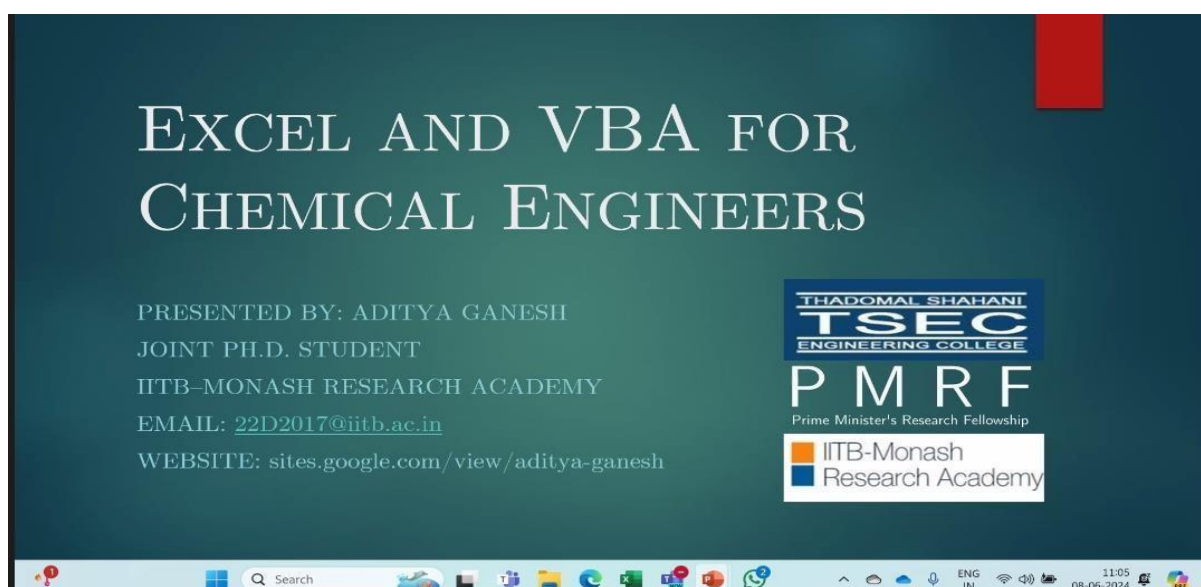
**Venue:** Microsoft Teams

**Day:** 22<sup>nd</sup> June, 2024

**Time:** 11.00 A.M.- 3.00 P.M.

**Objective:** To educate students about how to use MS Excel for advance calculations required in Chemical Engineering

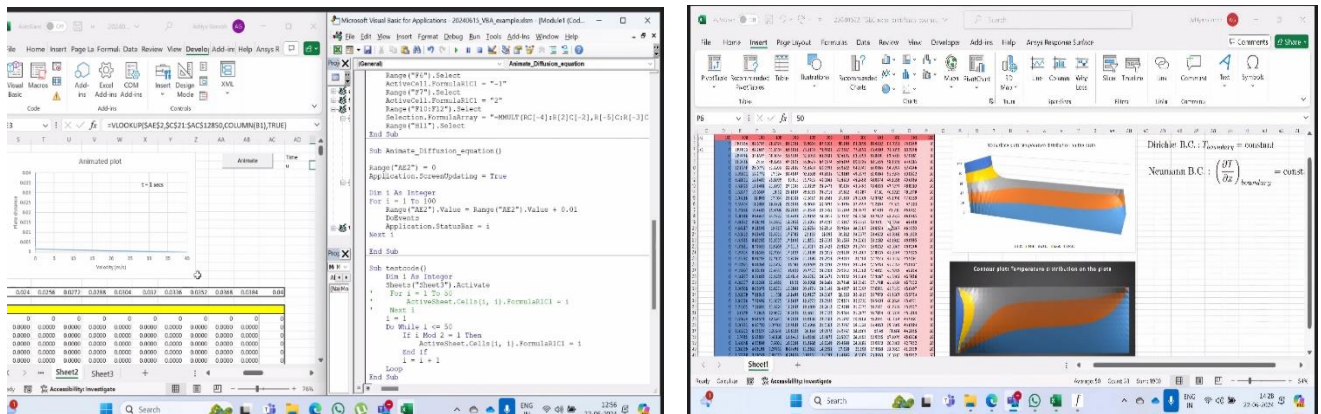
A workshop is being conducted on “MS Excel and VBA for Chemical Engineers” by Mr. Aditya Ganesh. The workshop is organized by the Chemical Engineering Department of TSEC. The duration of the workshop will be for 4 weeks on Saturday and Sunday.



The image shows a presentation slide with a dark blue background and a red vertical bar on the right. The title 'EXCEL AND VBA FOR CHEMICAL ENGINEERS' is written in large, white, serif capital letters. Below the title, the presenter's information is listed in smaller white text: 'PRESENTED BY: ADITYA GANESH', 'JOINT PH.D. STUDENT', 'IITB-MONASH RESEARCH ACADEMY', 'EMAIL: [22D2017@iitb.ac.in](mailto:22D2017@iitb.ac.in)', and 'WEBSITE: [sites.google.com/view/aditya-ganesh](https://sites.google.com/view/aditya-ganesh)'. On the right side, there are two logos: the top one is for 'THADOMAL SHAHANI TSEC ENGINEERING COLLEGE' and 'P M R F Prime Minister's Research Fellowship', and the bottom one is for 'IITB-Monash Research Academy'. At the bottom of the slide, a Windows taskbar is visible, showing the search bar, taskbar icons, and system tray with the date '08-06-2024' and time '11:05'.

The main purpose of organizing such a workshop is so as to make students learn how to use excel for advance chemical engineering calculations and also learning Visual Basics. Mr. Aditya Ganesh being an alumni of TSEC has done his masters from IIT Jodhpur and is currently pursuing his Ph.D. from IIT B-Monash Research Academy.

The workshop started by the speaker explaining what is meant by a steam table and how to use it for references. Also, how one can freeze a particular row or column in a steam table was explained by the speaker. Further the concept of VLookup was explained by the speaker which was used for selecting a particular value in a row or a column and also selecting multiple rows and columns at the same time. The subloop concept was also explained in this context. The most important topic like addition of animation in VBA was taught by the speaker.



In the second half of the session, the speaker made students understand and try different codes which were runned using Macros. The speaker also taught the students different commands using various loops like do while and for loops. The codes were based on simple topics like even odd numbers and similarly displaying it by using animation too. Afterwards the codes on for loop were practiced thoroughly. The next graph of 2d steady state diffusion was taken by the speaker by thoroughly explaining the concept.

The day of workshop ended on a high note where students asked their queries to the speaker where the queries of the and they were answered thoroughly by the speaker.

# Chemical Engineering Department, TSEC

## Report on “MS Excel and VBA for Chemical Engineers: Day-6”

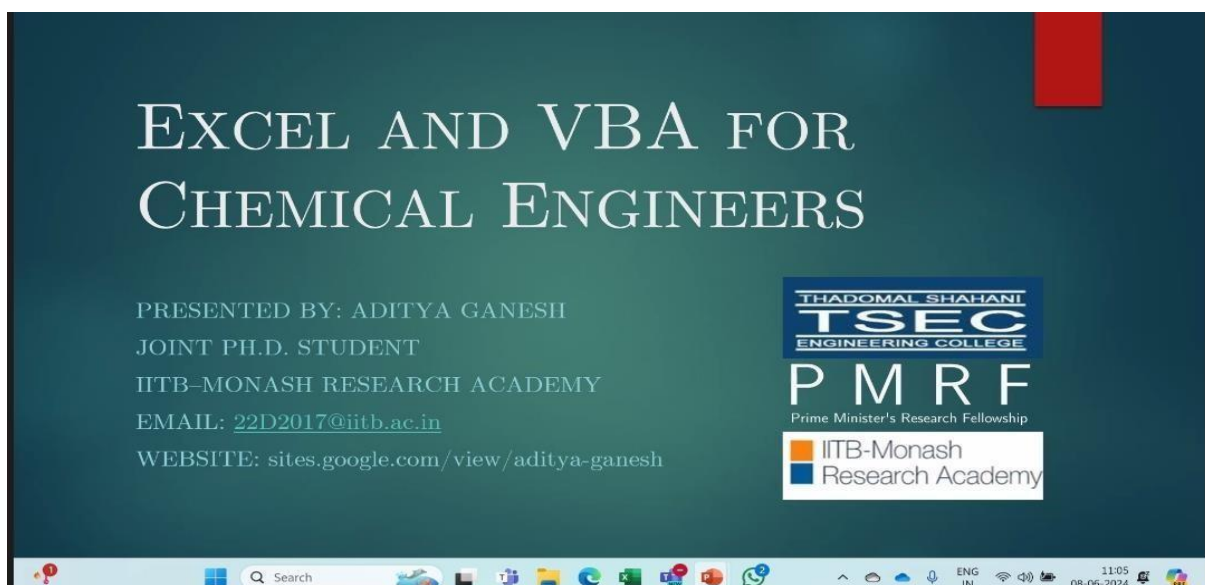
**Venue:** Microsoft Teams

**Day:** 23<sup>rd</sup> June, 2024

**Time:** 11.00 A.M.- 3.00 P.M.

**Objective:** To educate students about how to use MS Excel for advance calculations required in Chemical Engineering

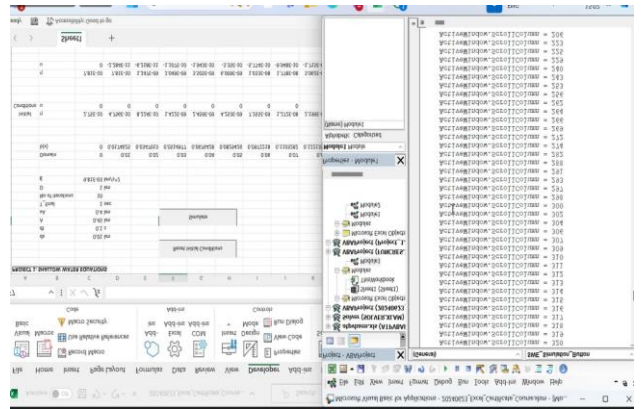
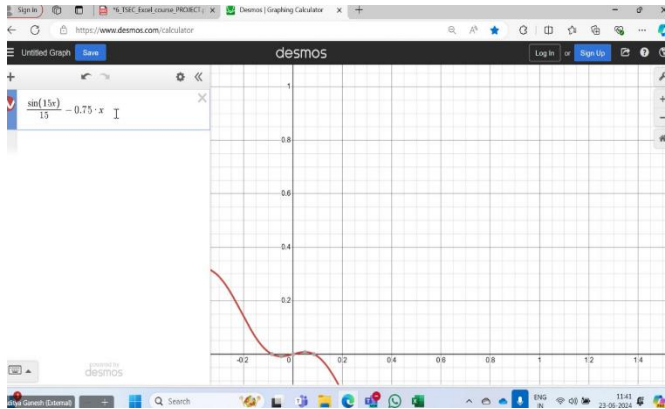
A workshop is being conducted on “MS Excel and VBA for Chemical Engineers” by Mr. Aditya Ganesh. The workshop is organized by the Chemical Engineering Department of TSEC. The duration of the workshop will be for 4 weeks on Saturday and Sunday.



The image shows a presentation slide with a dark blue background and white text. The title "EXCEL AND VBA FOR CHEMICAL ENGINEERS" is prominently displayed at the top. Below the title, the presenter's name "ADITYA GANESH" and his affiliation "JOINT PH.D. STUDENT, IITB-MONASH RESEARCH ACADEMY" are listed, along with his email address and a website link. On the right side, there are logos for "THADOMAL SHAHANI TSEC ENGINEERING COLLEGE" and "P M R F Prime Minister's Research Fellowship". At the bottom right, the "IITB-Monash Research Academy" logo is visible. The slide is shown within a Windows operating system window, with the taskbar at the bottom displaying various application icons and system information like the date and time.

The main purpose of organizing such a workshop is so as to make students learn how to use excel for advance chemical engineering calculations and also learning Visual Basics. Mr. Aditya Ganesh being an alumni of TSEC has done his masters from IIT Jodhpur and is currently pursuing his Ph.D. from IIT B-Monash Research Academy.

The workshop started by the speaker discussing the topics on which the students would be making the reports. The topics were thoroughly researched and the procedure of making a report was thoroughly explained by him. Further the speaker took the workshop on how the students would work on a topic of Tsunami waves detector by using excel. The day of the workshop ended by students executing the code under the guidance of the speaker.



The day of workshop ended on a high note where students asked their queries to the speaker where the queries of the and they were answered thoroughly by the speaker.

# Chemical Engineering Department, TSEC

## Report on “MS Excel and VBA for Chemical Engineers: Day-7”

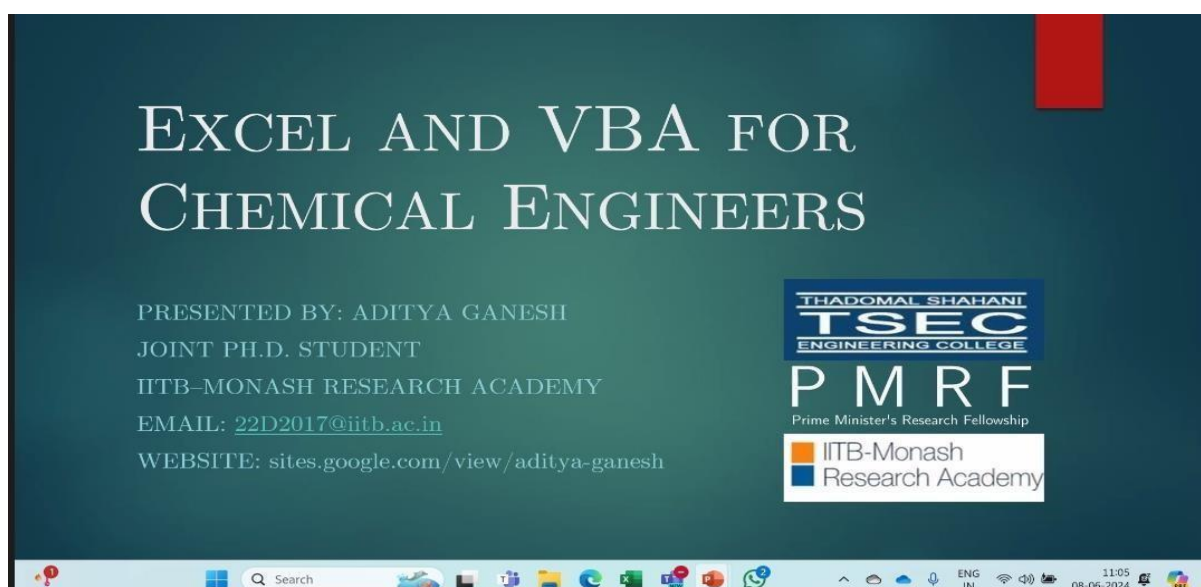
**Venue:** Microsoft Teams

**Day:** 29<sup>th</sup> June, 2024

**Time:** 11.00 A.M.- 3.00 P.M.

**Objective:** To educate students about how to use MS Excel for advance calculations required in Chemical Engineering

A workshop is being conducted on “MS Excel and VBA for Chemical Engineers” by Mr. Aditya Ganesh. The workshop is organized by the Chemical Engineering Department of TSEC. The duration of the workshop will be for 4 weeks on Saturday and Sunday.

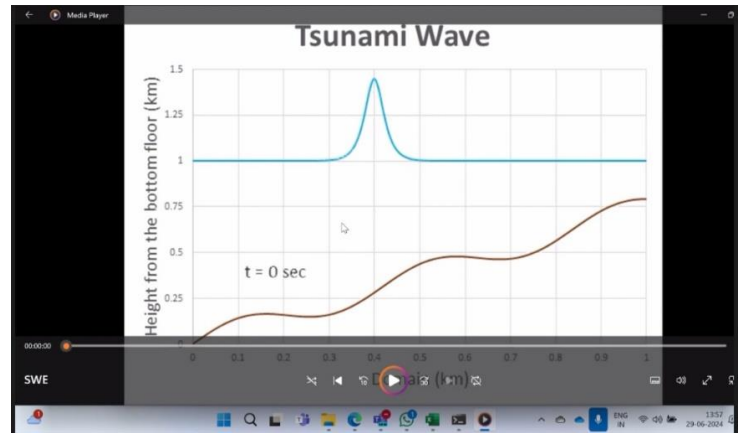
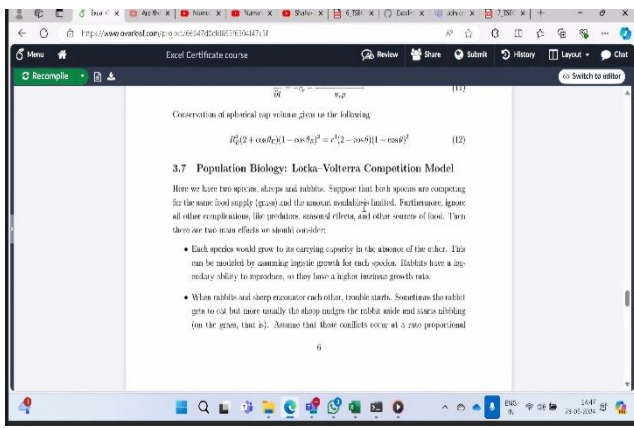


The image shows a presentation slide with a dark blue background and white text. The title "EXCEL AND VBA FOR CHEMICAL ENGINEERS" is prominently displayed at the top. Below the title, the presenter's information is listed: "PRESENTED BY: ADITYA GANESH, JOINT PH.D. STUDENT, IITB-MONASH RESEARCH ACADEMY". Contact details include "EMAIL: [22D2017@iitb.ac.in](mailto:22D2017@iitb.ac.in)" and "WEBSITE: [sites.google.com/view/aditya-ganesh](https://sites.google.com/view/aditya-ganesh)". On the right side, there are logos for "THADOMAL SHAHANI TSEC ENGINEERING COLLEGE" and "P M R F Prime Minister's Research Fellowship". At the bottom right, the "IITB-Monash Research Academy" logo is visible. The slide is framed by a Windows taskbar at the bottom, showing the search bar, taskbar icons, and system tray with the date "08-06-2024" and time "11:05".

The main purpose of organizing such a workshop is so as to make students learn how to use excel for advance chemical engineering calculations and also learning Visual Basics. Mr. Aditya Ganesh being an alumni of TSEC has done his masters from IIT Jodhpur and is currently pursuing his Ph.D. from IIT B-Monash Research Academy.



The workshop started by the speaker discussing the topics on which the students would be making the reports. The topics were thoroughly researched and the procedure of making a report was thoroughly explained by him. Further the speaker took the workshop on how the students would work on a topic of Tsunami waves detector by using excel. The day of the workshop ended by students executing the code under the guidance of the speaker. The code was completed by the students with the help of the speaker. The speaker further guided the students the topics of the report and how one can proceed with the topics. Students showed great interest throughout the session. Their queries regarding the project were answered by the speaker.



The day of workshop ended on a high note where students asked their queries to the speaker where the queries of the and they were answered thoroughly by the speaker.

# Chemical Engineering Department, TSEC

## Report on “MS Excel and VBA for Chemical Engineers:Day-8”

**Venue:** Microsoft Teams

**Day:** 6<sup>th</sup> July, 2024

**Time:** 11.00 A.M.- 3.00 P.M.

**Objective:** To educate students about how to use MS Excel for advance calculations required in Chemical Engineering

A workshop is being conducted on “MS Excel and VBA for Chemical Engineers” by Mr. Aditya Ganesh. The workshop is organized by the Chemical Engineering Department of TSEC. The duration of the workshop will be for 4 weeks on Saturday and Sunday.

EXCEL AND VBA FOR  
CHEMICAL ENGINEERS

PRESENTED BY: ADITYA GANESH  
JOINT PH.D. STUDENT  
IITB-MONASH RESEARCH ACADEMY  
EMAIL: [22D2017@iitb.ac.in](mailto:22D2017@iitb.ac.in)  
WEBSITE: [sites.google.com/view/aditya-ganesh](https://sites.google.com/view/aditya-ganesh)

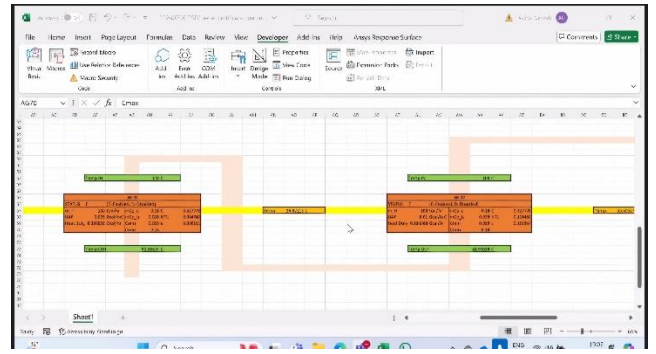
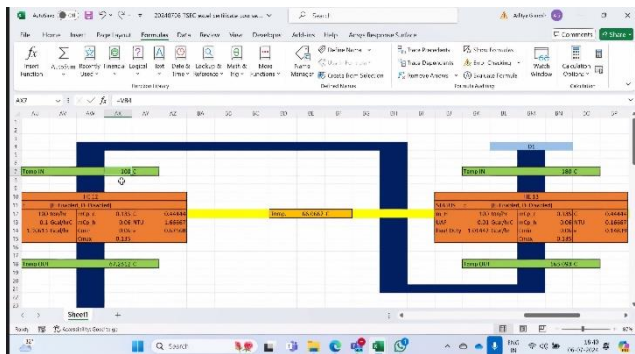
THADOMAL SHAHANI  
TSEC  
ENGINEERING COLLEGE

P M R F  
Prime Minister's Research Fellowship

IITB-Monash  
Research Academy

The main purpose of organizing such a workshop is so as to make students learn how to use excel for advance chemical engineering calculations and also learning Visual Basics. Mr. Aditya Ganesh being an alumni of TSEC has done his masters from IIT Jodhpur and is currently pursuing his Ph.D. from IIT B-Monash Research Academy.

The workshop started by the speaker discussing the topics on which the students would be making the reports. The topics were thoroughly researched and the procedure of making a report was thoroughly explained by him. Further the speaker took the workshop on how the students would work on a topic of Heat Exchange unit using excel. The day of the workshop ended by students executing the code under the guidance of the speaker. The code was completed by the students with the help of the speaker. The speaker further guided the students the topics of the report and how one can proceed with the topics. Students showed great interest throughout the session. Their queries regarding the project were answered by the speaker.



The last day of workshop ended on a high note where students asked their queries to the speaker where the queries of the and they were answered thoroughly by the speaker.

# THADOMAL SHAHANI ENGINEERING COLLEGE

Date 7<sup>th</sup> Februaury, 2024

To  
Mr. Shayantan Banerjee,  
PMRF scholar,  
IIT Bombay

Sub: Invitation for conducting PyTextCraft: 30 hrs workshop on Natural Language Processing with Python.

Dear Shayantan

We are happy to inform you that the Department of Electronics and Telecommunication engineering of Thadomal Shahani Engineering College is organizing a 10 day 30 hrs workshop on workshop on “Natural Language Processing using Python” from February 12 – February 23, 2024.

This course envisages preparing the students to dive into the fascinating world of Natural Language Processing, where coding meets language to unlock the secrets hidden in text. It will take the students beyond theoretical concepts, incorporating practical applications to ensure participants can seamlessly integrate NLP principles into their lives.

**In this connection we have pleasure in inviting you to conduct the 10 day workshop and engage a session on “Introduction to NLP, Opportunities and Challenges in the field of AI” on Friday 9<sup>th</sup>, 2024 from 11 am to 12.00 noon.**

Pl find attached the schedule for the workshop.

Thanking You

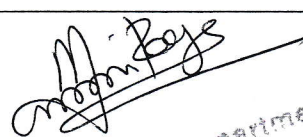


Dr Maniroja Edinburgh  
HOD, Dept of E & TC



# THADOMAL SHAHANI ENGINEERING COLLEGE

Date: 23/02/2024

Name of the Prime Ministers Research Fellow	Shayantan Banerjee
PMRF ID	1303164
Granting Institute Name	Indian Institute of Technology Bombay
Department	Koita Centre for Digital Health
Roll Number in the Granting Institute	22D1624
Name of the institute in which TA work is done	Thadomal Shahani Engineering College
Name of the course /subject for which the PMRF is a TA for	Natural language Processing techniques using Python
Nature of work (Tutorial/Demonstration/Workshop etc)	Workshop with both lectures and hands-on demonstration
Mode of teaching (Online/Offline)	Online
No of Hours completed	30
Start date of TA work	February 12 <sup>th</sup> , 2024
End date of TA work	February 23 <sup>rd</sup> , 2024
Endorsement from PhD Guide/Co-Guide	
Signature and Seal of the Principal/HoD of the institute in which TA work is carried out.	 Head of Department Electronics And Telecommunication Engineering Thadomal Shahani Engineering College

Received
   
 Shayantan Banerjee



# THADOMAL SHAHANI ENGINEERING COLLEGE

Date: 24<sup>th</sup>, February 2024

Dear Shayantan Banerjee,

We, the EXTC department would like to thank you for accepting our invitation to conduct a 30 hr workshop on 'Natural Language Processing Techniques using Python' at Thadomal Shahani Engineering College from 12<sup>th</sup> to 24<sup>th</sup> February 2024.

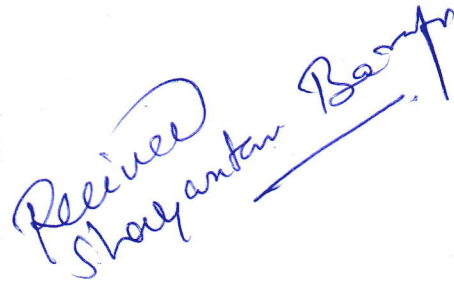
We are grateful for your time and effort to speak and inspire our students. Your insight and knowledge were invaluable and your presence was greatly appreciated. We are so thankful for your contribution.

We are looking forward for a positive collaboration in future

Thank you

  
Dr Maniroja Edinburgh

Head of Department  
Electronics And Telecommunication Engineering  
Thadomal Shahani Engineering College

  
Received  
Shayantan Banerjee

Timestamp	Roll no	Name of the Student	Email ID
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2-11-2024 15:26:15	35 Manas Mayekar	manasmkr24@gmail.cc

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 **GPS Map**  
**Camera Lite**

Shop No.3, Sai Sadan, 37th Road, Behind National College, New Building, Thadomal College Bandra West, Khar, Khar West, Mumbai, Maharashtra 400050, India

Latitude  
19.064564°

Longitude  
72.8357563°

Local 12:02:04 PM  
GMT 06:32:04 AM

Altitude 13 meters  
Friday, 09.02.2024



### Real newspaper headlines

For each of the following ambiguous headlines, identify the possible readings.

Headline: "Kids make nutritious snacks."

Select one:

- A. "Children are nutritious when you eat them as snacks"
- B. "When consumed as snacks, children are nutritious"
- C. "Children learn how to make snacks that are nutritious"
- D. "Children are nutritious when eaten as snacks."
- E. "Children make snacks that are nutritious"
- F. "People create nutritious snacks for children"
- G. "Children are nutritious after eating snacks."



Shop No.3, Sai Sadan, 37th Road, Behind National College, New Building, Thadomal College Bandra West, Khar, Khar West, Mumbai, Maharashtra 400050, India

Latitude  
19.0645703°

Longitude  
72.8357394°

Local 12:01:40 PM  
GMT 06:31:40 AM

Altitude 13 meters  
Friday, 09.02.2024



[ve.google.com/u/0/open?usp=forms\\_web&id=1FWq\\_b6Vgu3LmFAmU55F9Z3K1h7Rh4wHS](https://ve.google.com/u/0/open?usp=forms_web&id=1FWq_b6Vgu3LmFAmU55F9Z3K1h7Rh4wHS)

[ve.google.com/u/0/open?usp=forms\\_web&id=1WN9wcKRUQtAMhXzLjr4N9a3CfKtRBPb\\_](https://ve.google.com/u/0/open?usp=forms_web&id=1WN9wcKRUQtAMhXzLjr4N9a3CfKtRBPb_)

[ve.google.com/u/0/open?usp=forms\\_web&id=1WufinmtgsxAaAJ8D5Im7sNmHmCNz857U](https://ve.google.com/u/0/open?usp=forms_web&id=1WufinmtgsxAaAJ8D5Im7sNmHmCNz857U)

[ve.google.com/u/0/open?usp=forms\\_web&id=10aY0m2I0wvGZjhMW7YpNth7rnNgw4LMV](https://ve.google.com/u/0/open?usp=forms_web&id=10aY0m2I0wvGZjhMW7YpNth7rnNgw4LMV)

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[ve.google.com/u/0/open?usp=forms\\_web&id=1unwIXpKQXBNnHHeSZ6SsXF1ElvdNKwUd](https://ve.google.com/u/0/open?usp=forms_web&id=1unwIXpKQXBNnHHeSZ6SsXF1ElvdNKwUd)



# NPTEL Lab Certification

(Funded by the MoE, Govt. of India)



This certificate is awarded to

**DHRUV DALVI**

for successfully completing the Lab workshop on

**Digital System Design and Verification using CPLD board (Krypton)**

conducted by Prof. Virendra Singh, Wadhvani Electronics Lab (WEL),  
Electrical Engineering Department, IIT Bombay  
during 3th - 14th June, 2024



**Prof. Andrew Thangaraj**  
NPTEL Coordinator  
IIT Madras



Indian Institute of Technology Madras







# CERTIFICATE OF TRAINING COMPLETION

This is to certify that

Mr./Ms. KHAN FAHED JAVED

has successfully completed his / her term of Training

in Machine Learning from 11-Jun-2024

to 11-Jul-2024 and has proven his/her

competency with utmost dedication and promise.



Certificate number: AGC2024060328  
For certificate authentication  
Scan QR code

Challa Rohit  
Academic Head





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Amrit Mahotsav



Thadomal Shahani Engineering College  
Internal Quality Assurance Cell  
Estd. 2017

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# CERTIFICATE

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*Laxmi Pujari*

for successfully completing 30 hours course from 27th June 2024 to 1st July 2024 on **Proficiency In Java Programming** organized by **Department of Electronics and Telecommunication Engineering, TSEC** in collaboration with **Kaizen Future Tech.**

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Edinburgh



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This certificate is presented to

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*Bootwala Abdullah*

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This certificate is presented to

*Mishra Ojaswi*

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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



# 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**

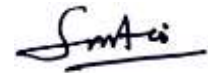
The institution offering the Programmes should be approved by AICTE and must be Institutional Member of ISTE. Institutions having ISTE Faculty Chapter and Students Chapter shall be preferred. There will be no financial commitment on the part of ISTE on account of this programme. The fee of one **proposal 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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- 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

## 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: 30<sup>th</sup> 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.habar@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: 3<sup>rd</sup> June – 8<sup>th</sup> 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'**

03<sup>rd</sup> – 08<sup>th</sup> 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	<b>Keynote Address:</b> 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

**Registration Details:**

Sr No.	Full Name of the Participant	E-mail	Designation	College/Institute Name
1	Kalpana Deorukhkar	kalpanas@fragnet.edu.in	Asst. Prof	Fr. CRCE, Bandra
2	Himani Deshpande	himani.deshpande@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
3	Susmita Das	das.susmita63@gmail.com	Astt. Prof.	Thadomal Shahani Engineering College
4	Sulbha Yadav	sulbha.yadav@itce.in	Assistant Professor	Lokmanya Tilak college of engineering, koparkhairane
5	SUNITA D.RATHOD	sunita.rathod@gmail.com	ASSISTANT PROFESSOR	Thadomal Shahani Engineering College
6	Kirti Motwani	kirti.m@xavier.ac.in	Assistant professor	Xavier Institute of Engineering
8	Dr. Jyoti Ganesh Wadmare	jjyoti@somaia.edu	Asst. Professor	K.J. Somaia Institute of Technology
9	Veena Trivedi	Veena.trivedi@ves.ac.in	Assistant professor	Vivekanand Education Society's Institute Of Technology
10	Dr. Gauri Shukla	gauri.shukla@thadomal.org	Associate Professor	Thadomal Shahani Engineering College
12	Indu Dokare	indu.dokare@ves.ac.in	Assistant Professor	Vivekanand Education Society's Institute of Technology
13	shrishiti N Bhatia	shrishiti.bhatia@thadomal.org	Associate Professor	Thadomal Shahani Engineering College
14	Manisha Mathur	manisha.mathur@ves.ac.in	Assistant Professor	Vivekanand Education Society's Institute of Technology
15	Jeenal Mulchand Rambhia	jeenal.rambhia7@gmail.com	Assistant Professor	Fr. Conceicao Rodrigues College of Engineering
16	Manisha Prakash Dumbre	manisha.dumbre@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
17	Priya Paresch Chaudhari	priyachaudhari@sfit.ac.in	Assistant Professor	St. Francis Institute of Technology
18	Amrita Mathur	amritamathur@sfit.ac.in	Assistant professor	St. Francis Institutes of Technology
19	Garima Singh	garimasingh.ece@gmail.com	Asst Professor	St. Francis Institutes of Technology
20	Dr. Vaishali Jadhav	vaishalijadhav@sfit.ac.in	Assistant Professor	St. Francis Institutes of Technology
21	Kalyani Soni	kalyanisoni@sfit.ac.in	Asst prof	St. Francis Institutes of Technology
22	Priyanka Jeetendra Patil	priyankaj.patil@universal.edu.in	Assistant Professor	Universal college of Engineering
23	Dr. Hemalatha K N	hemalathakn.ec@drait.edu.in	Assistant Professor	Dr. Ambedkar Institute of Technology
24	Rupali Sarode	rupali.patil@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
25	Rucha Deepak Kulkarni	rdkulkarni@apsit.edu.in	Assistant professor	A. P. Shah institute of technology
26	Chetan Agarwal	Chetan.agarwal@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
27	Sanjay Kumar Pandey	sanjay.pandey@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
28	Vijaya Bharathi Jagan	vbjagan@apsit.edu.in	Assistant Professor	A.P. Shah Institute of Technology
29	Lalita Moharkar	lalita.m@xavier.ac.in	Assistant professor	Xavier Institute of Engineering
30	Meenu Ramesh Bhatia	meenu.bhatia@thadomal.org	ASSISTANT PROFESSOR	Thadomal Shahani Engineering College
31	Dr. Swati Vaibhav Narwane	swati29narwane@gmail.com	Associate Professor	MCT'S Rajiv Gandhi Institute of Technology
32	Tawheed Ahmed - Abdul Wahid - Ansari	tawheedahmed.a@somaia.edu	Student	KJ Somaia Institute of Technology
33	Vedant Atul Chaudhari	vedant.chaudhari@somaia.edu	Student	KJ Somaia Institute of Technology
34	ARCHANA PASCAL LOPES	archana_lopes@frcrce.ac.in	ASSISTANT PROFESSOR	FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING
35	Sheetal Avinash Gondal	sheetal.gondal@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
36	Reshma Malik	reshma.malik@thadomal.org	Assistant professor	Thadomal Shahani Engineering College
37	Swikruti Dongaonkar	swikrutidongaonkar@atharvacoe.ac.in	Assistant Professor	Atharva College of Engineering
38	Purvi Agarwal	purviagarwal@atharvacoe.ac.in	Assistant Professor	Atharva College of Engineering
39	Shanthi Therese S	shanthitherese123@gmail.com	Associate Professor	Thadomal Shahani Engineering College
40	Dr Nikhilesh Joshi	jnikhilesh@gmail.com	Asst Prof	Thadomal Shahani Engineering College
41	Dr. Ashish V. Vanmali	ashish.vanmali@vcet.edu.in	Associate Professor	VCET, Vasai
42	Bhavna Bose	bhavna.bose@nmims.edu	Assistant Professor	Mukesh Patel School Of Technology Management and Engineering
43	Geeta Hemant Karande	geeta1410@gmail.com	Assistant Professor	Thadomal Shahani Engineering College
44	Nidhi Nirav Chitalia	sanghavinidhi23.ns@gmail.com	Assistant Professor	St. Francis Institute Of Technology
45	Arun Kulkarni	kkkarun@yahoo.com	Professor	Thadomal Shahani Engineering College
46	Vipra Dave	vipratsec@gmail.com	Assistant Professor	Thadomal Shahani Engineering College
47	Dr. Rohini Temkar	rohini.temkar@ves.ac.in	Assistant Professor	Vivekanand Education Society's Institute Of Technology
48	Sonali Bhushan Jadhav	sonalijadhav@thadomal.org	Assistant Professor	Thadomal Shahani Engineering College
49	Jayant Gadge	jayantrg@gmail.com	Professor	Thadomal Shahani Engineering College
50	Thirumahal R	trk1193@gmail.com	Asst. Prof(SG)	PSG College of Technology
51	Aniket Mishra	Amaniketmishra2@gmail.com	Assistant professor	Thakur college of Engineering and Technology
52	Abha Tewari	abha.tewari@ves.ac.in	Assistant professor	Vivekanand Education Society's Institute Of Technology
53	Dr. Kumkum Saxena	kumkum.saxena@thadomal.org	Associate Professor	Thadomal Shahani Engineering College
54	Shubham Ganeshdin Yadav	shubhamyadav97660@gmail.com	Student	Thadomal Shahani Engineering College
55	Adarsh Mishra	3277adarshmishra@gmail.com	Student	Thadomal Sahani Engineering College
56	Aarna Bafna	aarnabafna@gmail.com	Student	Thadomal Shahani Engineering College
57	Atharva Jadhav	me.atharvajadhav@gmail.com	Student	Thadomal Shahani Engineering College
58	Vignesh Pai	vigneshpai27@gmail.com	Student	Thadomal Shahani Engineering College



## Resource Persons:

<b>Sr. No.</b>	<b>Name of the Speaker</b>	<b>Qualification</b>	<b>College/Institute</b>
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.



Founded 1968

# Indian Society for Technical Education

## Certificate

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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

  
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 Amrita Mathur (Guest)  
Meeting guest

Arun Kulkarni

AV ashish vanmali

AJ ATHARVA JADHAV

BB Bhavna Bose

Chetan Agarwal

Nifty smicap  
+2.23%

Search

12:13 PM 03-06-2024

Deep RNN


DR. HIMANI DESHPANDE (TSSC, MUMBAI)

Himani Deshpande

STTP on GAN and Autoencoders for Computer Vision- Day 2

58:27

## 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 Koshli, Fr. CRCE, Bandra, Mumbai

62

94°F Smoke

ENG INTL 02:32 PM 04-06-2024

STTP on GAN and Autoencoders for Computer Vision- Day 2

02:16:54

teams.microsoft.com/v2/meeting/join=true#/meetup-join/19p05y4AQNCgLUd5lw4P5FuequNetMh45FiPGmpuy81@thread.tacv2/1717433065469?context=%7b%22tid%3a...

01:23:50

33

Turn camera off (Ctrl+Shift+O)

Meenu Bha... Shachi Natu... VJ... K... Vijaya Bhar... Kalpana IU... PA... Vipra Dave... Purni Agar... Sonali Jadh... View all

93°F Smoke

ENG INTL 03:51 PM 04-06-2024



STTP on GAN and Autoencoders for Computer Vision- Day 3

01:46:13

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Participants

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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

Quick tour

colab.research.google.com/drive/1dG9Y2dXWdMMbaw7sh3\_9MlWvTwt\_yfzroItoGw68PD\_RqLdC

Finetuning model Huggingface.ipynb

File Edit View Insert Runtime Tools Help

+ Code + Text

```

import 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 (1/5) <<cell line: 1> > system() > _system_compat() > _run_command() > _monitor_process() > _poll_process()

```

Shachi Natu

Nifty midcap +2.87%

Search

ENG INTL 11:41 AM 05-06-2024

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

Generative Models

MAGIC

Ujwala Bharambe

32°C Partly sunny

Search

ENG INTL 12:11 PM 05-06-2024

STTP on GAN and Autoencoders for Computer Vision- Day 3

10:55

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
- SN Shachi Natu Organizer
- UB Ujwala Bхарambe

Attendees (27)

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

Ujwala Bхарambe

33°C Partly sunny

Search

ENG INTL 02:05 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  
x<sub>1</sub> x<sub>2</sub> x<sub>3</sub> x<sub>4</sub>

Encoder #8  
Encoder #2  
Encoder #1

77

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
- Arun Kulkarni
- AV ashish vanmali
- AJ ATHARVA JADHAV
- BB Bhavna Bose
- 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

**Development Features**

- Channel Integrations
- Customizability
- Search Support
- SDK Support
- BBAC Support

**Ease of Development**

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

**Analytics and Insights**

- Log Storage
- Sentiment Analysis
- Monitoring and Maintenance

**NFRs**

- Pricing
- Security
- Model Transparency
- Cloud Compatibility

publicis sapient

