



IEEE  
COMPUTER  
SOCIETY



A Report on

# Machine Intelligence in Image Processing - MIIP

Event Date: 15<sup>th</sup> February 2022

Organized by:

**Sarvajani College of Engineering and  
Technology, Surat**

and

**IEEE Signal Processing Society GS (Gujarat Section)**

Technically co-sponsored by

**IEEE Computer Society Chapter GS,**

**IEEE Computational Intelligence Society Chapter,**

**IEEE SCET Student Branch**

**IEEE SPS SCET Student Branch Chapter**



**Sarvajanik College of Engineering and Technology, Surat**  
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 IEEE SCET Student Branch & IEEE SPS SCET Student Branch Chapter**

# Machine Intelligence in Image Processing

**15th February 2022**

**1:00 PM to 5:00PM IST**

**E-Certificate will be Provided**

**No Registration Fees**

**For Any Queries Contact**

- Muskan Jhavar: +91 72020 95213
- Abanob Bhanu: +91 70437 75099



0110  
0100  
1001

**Scan to Register**



(WebEx link will be sent to registered participants)

<https://bit.ly/MIIP-Feb2022>

/ SCET official

/ ieeespsgs



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# Machine Intelligence in Image Processing



**Dr. Ajit Rajwade**

ASSOCIATE PROFESSOR  
 DEPARTMENT OF COMPUTER  
 SCIENCE AND ENGINEERING  
 IIT BOMBAY



**Prof. Rajat Kumar De**

PROFESSOR  
 INDIAN STATISTICAL INSTITUTE  
 CALCUTTA

0110  
0100  
1001

/ ieeespsgs

[ieeespsgs.org/](http://ieeespsgs.org/)

/ IEEE SCET SB

## **The team behind the Event:**

**Organizing Chair:** Prof. Dr. Chirag Paunwala and Prof. Dr. Nehal Shah

**Faculty Coordinator:** Prof. Dr. Vandana Shah and Prof. Ashish Phophalia

**Student Coordinators:**

- Abanob Bhanu, chair, IEEE SCET SB
- Muskan Jhavar, secretary, IEEE SCET SB

**Organizing Team:**

- Prof. Ketki Pathak, Branch Counsellor, IEEE SCET SB
- Prof. Maniklal Das, Chair, IEEE Computer Society Gujarat Chapter
- Prof. Mehul Raval, Chair, IEEE Computational Intelligence Society, GS
- Prof. Sarosh Dastoor, Advisor, IEEE SPS SCET Student Branch Chapter

## **Event Details:**

**Event Type:** Technical Talk

**Event Mode:** Online

**Event Platform:** Google Meet (<https://meet.google.com/mjd-auyt-zqn>)

**Event Category:** Technical Talk

**Event Date and Time:** 15<sup>th</sup> FEB 2022, 1:15 PM to 5:00 PM

**Event Accessibility:** For registered participants

**Event-Related Links:**

**Registration Link:** <https://bit.ly/MIIP-Feb2022>

-

## Event Insight:

### About the event:

Sarvajanik College of Engineering and Technology, Surat, in association with IEEE SPS (Signal Processing Society) SCET Student Branch Chapter, IEEE SPS GS (Gujarat Section) and technically co-sponsored by IEEE Computer Society Chapter, Computational Intelligence Society chapter and IEEE SCET Student Branch would like to arrange a talk series on “Machine Intelligence in Image Processing” on 15<sup>th</sup> February 2022. Prof. Ajit Rajwade and Prof. Rajat Dey would be invited as speakers for this talk.

## Speaker of the Event:

Under this technical talk, we had two speakers.

### Speaker 1: Prof. Dr. Ajit Rajwade

Prof. Ajit Rajwade is an Associate Professor in the Department of Computer Science and Engineering at IIT Bombay. His research interests are in image processing, signal processing, and computer vision, with a focus on compressed sensing, group testing, image restoration, image compression, tomography, and non-parametric probability density estimation. He is a senior member of the IEEE and has won an Excellence in Teaching Award at IIT Bombay in 2019. He is an associate editor of the journal Signal Processing (Elsevier).

### Speaker 2: Prof. Rajat Kumar De

Prof. Rajat Dey is a professor at Indian Statistical Institute from Calcutta, he is Ph.D. in Computer Science. His research interest is in Bioinformatics and Computational Biology, Systems Biology, ANN, Pattern Recognition, and Soft Computing.

## Schedule of the Event:

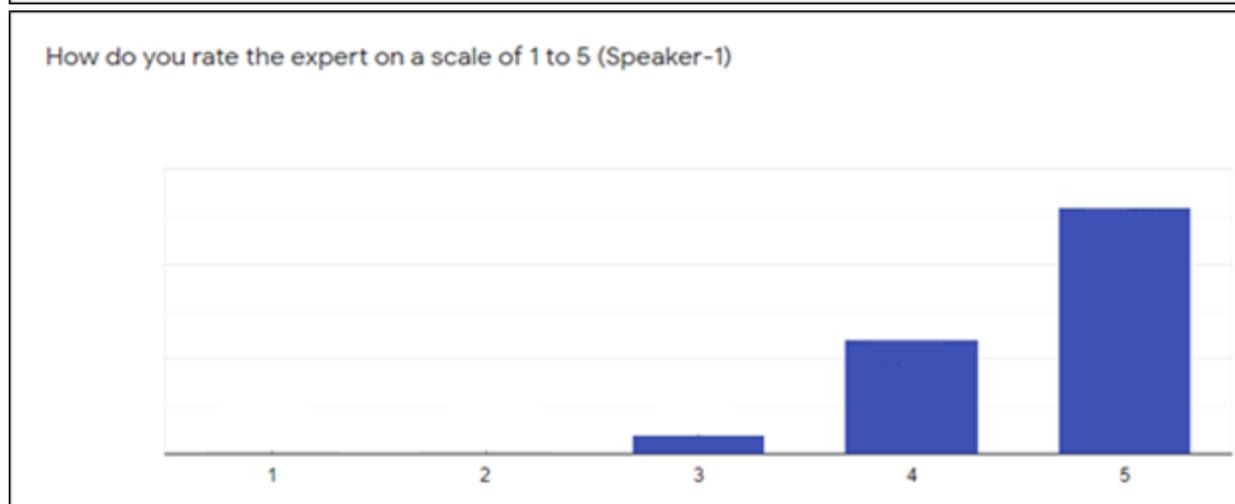
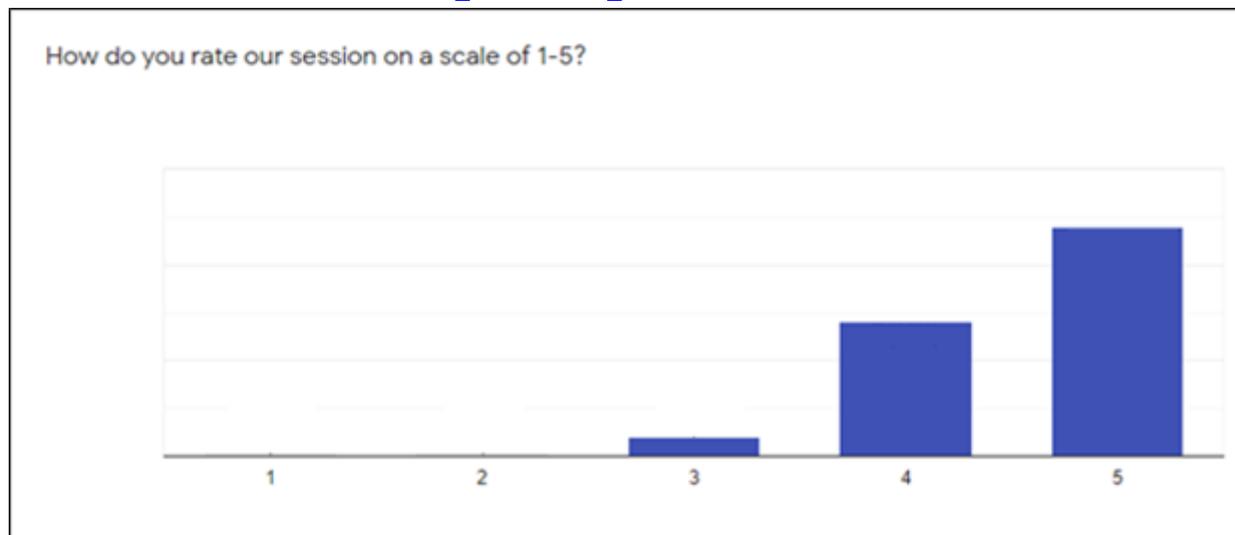
Sr. No.	Programme
1.	Inauguration of the event (Prayer: Saraswati Vandana)
2.	Welcome Speech by HOD of EC Department- Prof. Dr. Nehal Shah
3.	Introduction of a speaker, Dr.Ajit Rajwade from IITB
4.	A talk by Dr. Ajit Rajwade
5.	E-momento by Prof. Dr. Chirag Paunwala
6.	Introduction of a speaker, Prof. Dr. Rajat Kumar De
7.	A talk by Dr. Rajat Dey
8.	E-momento by Prof. Dr. Vandana Shah
9.	Valedictory of the event

## Registration and Event Management:

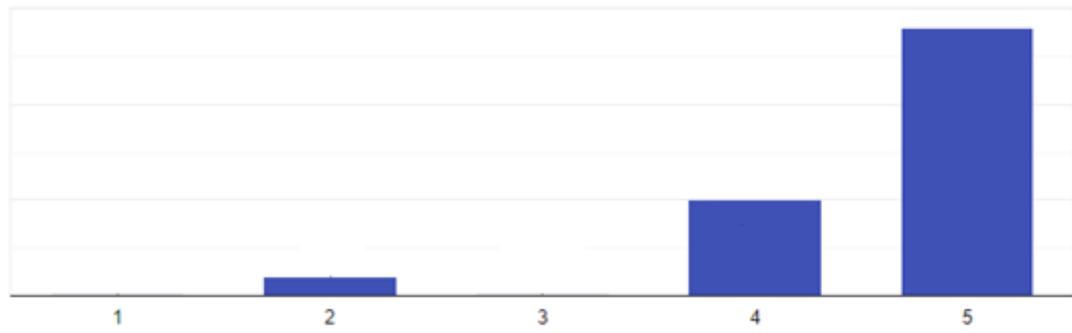
Registration of the event started on 5<sup>th</sup> February 2022 and we received total 67 participants from different colleges of Gujarat like Silver Oak University, Dhirubhai Ambani Institute of Information and Communication Technology, Gujarat University, Sarvajanik College of Engineering and Technology and many more colleges and few other participants from other cities of country. Registration, as well as anchoring, was managed by student's office bearers of IEEE SPS SCET SBC and IEEE SCET SB, including Abanob Bhanu and Muskan Jhavar, and Poster Designing was done by Parth Gajjar.

The event was very well-managed by Prof. Dr. Vandana Shah, Assistant Professor from Electronics and Communication Department, SCET, and supported by Prof. Dr. Nehal Shah, Head of Electronics and Communication Department, SCET.

## Feedback from the participants:



How do you rate the expert on a scale of 1 to 5 (Speaker-2)



## A glimpse of event:

**Compressed Sensing for Pooled Testing**

Include sample in test  
 Do not include sample in test

	1	2	...	n	Result of qPCR
Test 1	✓	✗	...	✗	+
Test 2	✗	✗	...	✗	-
Test 3	✗	✓	...	✗	+
Test 4	✗	✗	...	✗	-
Test 5	✗	✗	...	✗	-
Test 6	✗	✗	...	✗	-
Test 7	✗	✗	...	✗	-
Test 8	✗	✗	...	✗	-
Test 9	✗	✗	...	✗	-
Test 10	✗	✗	...	✗	-

**Quantitative PCR:**  
 Gives viral load information – unlike many binary group testing algorithms

$m \gg s \log n$   
 $s = \# \text{ infected people}$

REC Ajit Rajwade is presenting

Method	false positives	false negatives
COMP-NSI ASSO	13	0
COMP-NSI OMP	3	0
COMP-SEK	0	0

Experiment: ... at ... using a liquid handling robot

2:37 PM | mjd-ayyt-zqn

In-call messages

Messages can only be seen by people in the call and are deleted when the call ends.

yes

Ketki Pathak 2:31 PM  
Apart from COMP pursuits there other pursuits are also what makes comp preferable

like OMP

Ketki Pathak 2:33 PM  
Thank you sir

Niteen Patel 2:33 PM  
How lab measured and concluded y, from given A and Actual X?

Ketki Pathak 2:33 PM  
ok sir

Send a message to everyone

REC Rajat De is presenting

3:35 PM | mjd-ayyt-zqn

Niteen Patel

scet emeet

chirag paunwala

Ashish Phophalia

190\_019 Muskan Jha...

Dr. Yogesh Megh...

You

REC

190\_062 Rutvik S...

190\_019 Muskan...

scet emeet

Ashish Phophalia

Ajit Rajwade

chirag paunwala

Dr. Yogesh Meghr...

Niteen Patel

nehal shah

18\_Garvit Saraf

34\_hemish Mang...

Rajat De

07\_Vineet Bulsara

190\_024 Muham...

190\_057 Ritavi

Vikas Gokhale

1823\_kishanraj K

Bhavik Pandya

49\_Mihir Patel

Sarosh Dastoo

36\_Umang Mishry

Vedant Pandya

202071001 Sahani...

20\_Desika Jariwa...

29\_janak Khuman

D20\_07\_Jayvin ...

Ravi Raval

Ketki Pathak

Gitam Shikkena...

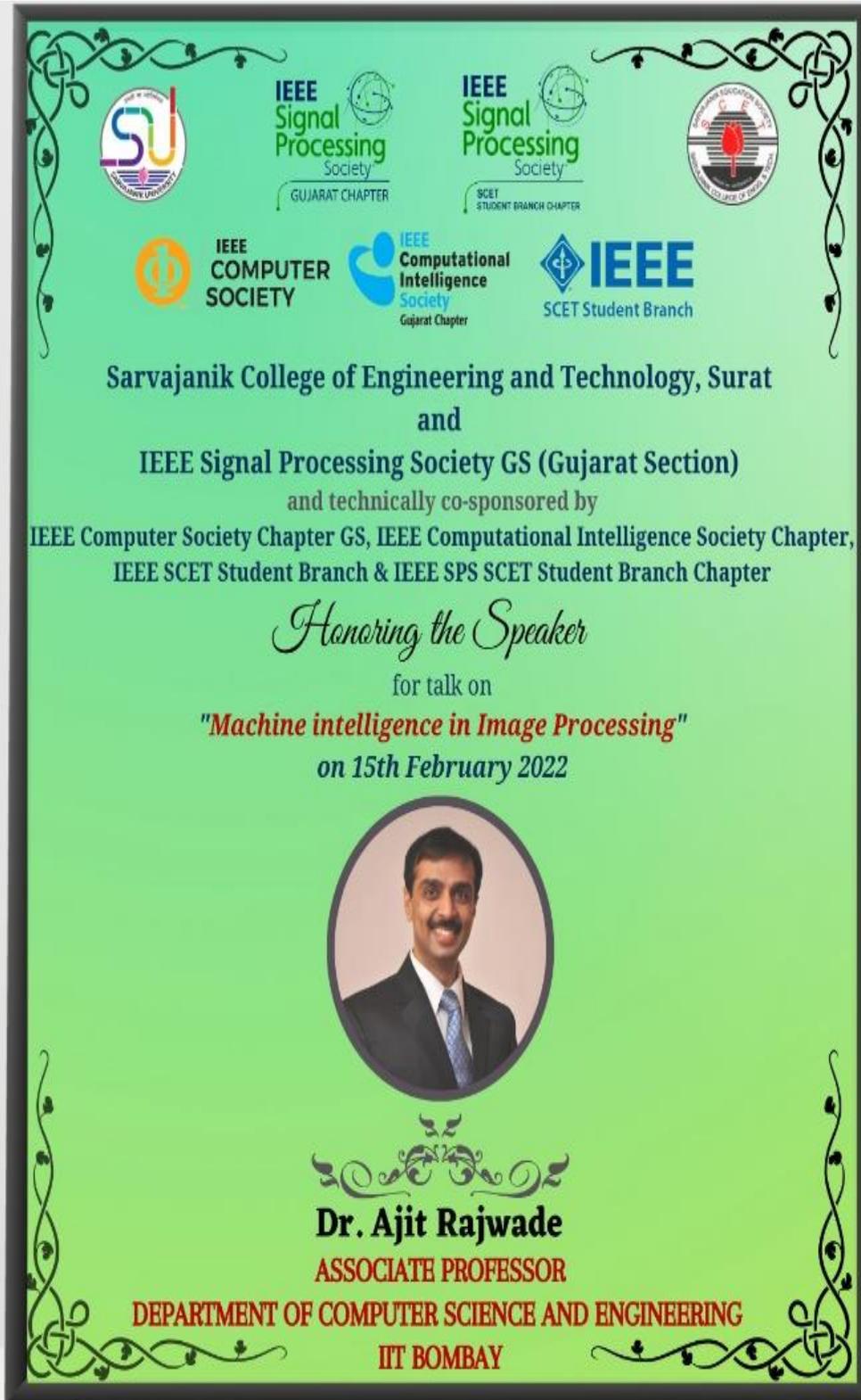
ANITA BHATT

02\_EC\_...

You

3:04 PM | mjd-ayyt-zqn

# E-memento presented to Dr. Ajit Rajwade



The e-memento certificate is framed with a decorative green border. At the top, it features logos for Sarva Jyoti's University (SU), IEEE Signal Processing Society (Gujarat Chapter and SCET Student Branch Chapter), IEEE Computer Society, IEEE Computational Intelligence Society (Gujarat Chapter), and IEEE SCET Student Branch. The text in the center reads: "Sarvajanik College of Engineering and Technology, Surat and IEEE Signal Processing Society GS (Gujarat Section) and technically co-sponsored by IEEE Computer Society Chapter GS, IEEE Computational Intelligence Society Chapter, IEEE SCET Student Branch & IEEE SPS SCET Student Branch Chapter". Below this, it says "Honoring the Speaker for talk on 'Machine intelligence in Image Processing' on 15th February 2022". A circular portrait of Dr. Ajit Rajwade is centered below the text. At the bottom, it identifies him as "Dr. Ajit Rajwade, ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, IIT BOMBAY".

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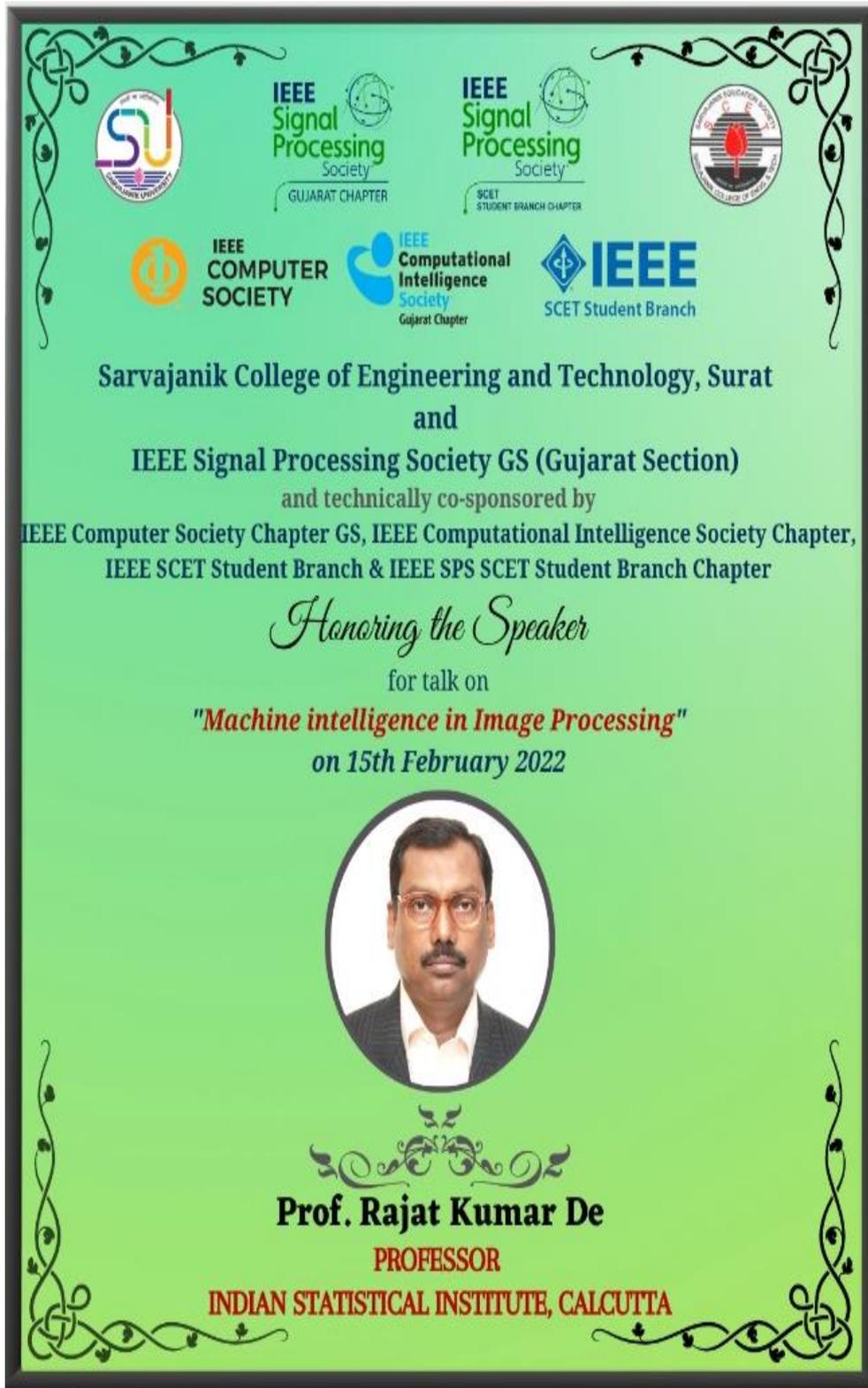
*Honoring the Speaker*  
for talk on  
**"Machine intelligence in Image Processing"**  
on 15th February 2022



**Dr. Ajit Rajwade**  
ASSOCIATE PROFESSOR  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
IIT BOMBAY



# E-memento presented to Dr. Rjat De



**Report Compiled by:** Prof. Dr. Vandan Shah, Abanob Bhanu-IEEE SCET SB Chair, and Muskan Jhawar-IEEE SCET SB Secretary.