



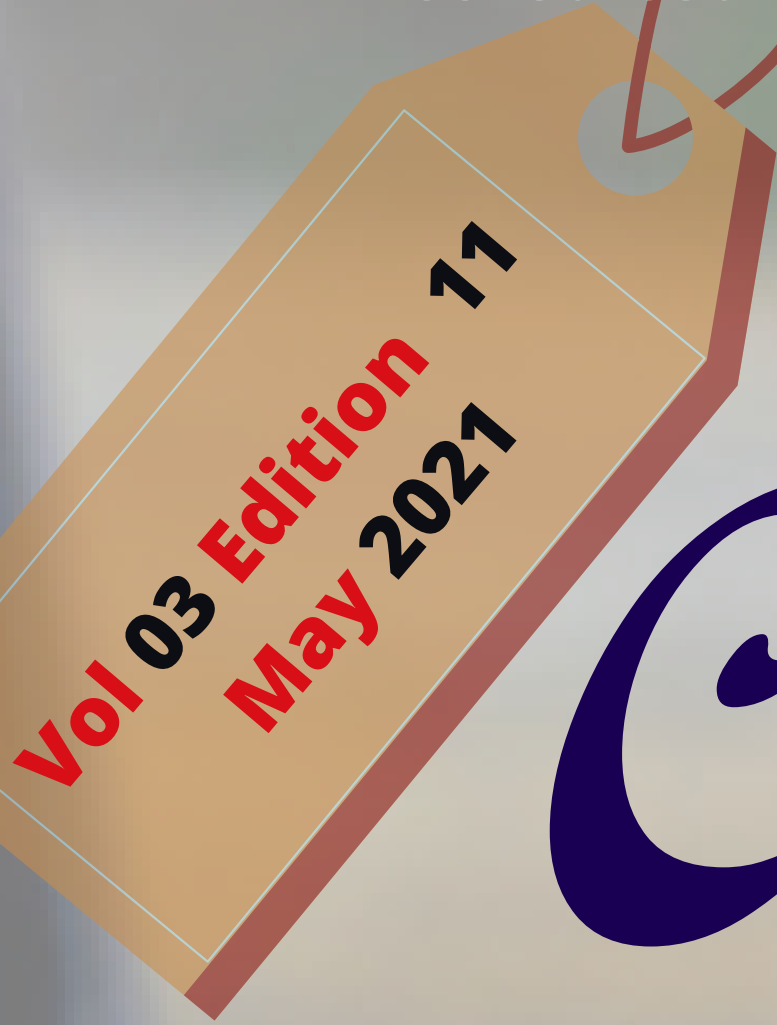
UNIVERSAL

Vidya Vikas Education Trust's

Universal College of Engineering

Approved by AICTE, DTE, Maharashtra State Government and Affiliated to University of Mumbai

Accredited with 'B+' grade by NAAC | Recognised as Linguistic (Gujarati)
Minority Institution



Coffee & Code ;

An Initiative by the Department of Computer Engineering

VISION

To be recognized as a department that provides quality technical education and research opportunities that eventually caters to helping and serving the community.

MISSION

- To groom the students to participate in curricular and co-curricular activities by providing efficient resources.
- To motivate the students to solve real world problems to help the society grow.
- To provide a learning ambience to enhance innovations, team spirit and leadership qualities for students.

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Industry Experts

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In Association with



(Computer Engineering Student Association)

15th Inter-Collegiate/Institute/Department Avishkar Research Convention (2020-21)



Board of Students' Development, University of Mumbai conducted the 15th Avishkar Research Convention activity on Virtual Platform. This year, the convention was based on the research proposal as well as preliminary work (if done) by the students.

Under the guidance of the head of the computer engineering department Dr. Jitendra Saturwar, BE Project Coordinator Mrs. Vishakha Shelke attended the workshop on 15th Inter-Collegiate/Institute/Department Avishkar Research Convention on 24 March 2021 from 9:30 am to 2:00 pm and registered as teacher coordinator for the convention.

Universal College of Engineering registered online on the portal available on the website www.unimumbaidsd.com. Mr. Gunjan Mehta, General Secretary Students' Council, Ms. Khushboo Gogri, Academic Secretary, Students' Council worked as student coordinators. Department of computer engineering submitted 3 research proposals in Engineering and Technology category and UG level for the Selection Round on 5th April 2021.

Following BE project guide and students submitted the research proposal.

1.Eduroid - A Rural Education Based Application

Mentor- Dr. Jitendra Saturwar, Professor, Head of Computer Engineering Department
Project Members- Ms. Singh Neha, Mr. Sangani Harsh, Mr. Kothari Rahil

2.Searchious - Locating missing people using an optimized face recognition algorithm

Mentor- Mrs. Vishakha Shelke
Project Members- Mr. Gunjan Mehta ,Ms. Gomase Prajakta, Ms. Bangera Trisha

3.Depressscape: Depression Monitoring Through Social Media

Mentor- Mrs. Vishakha Shelke
Project Members- Ms. Khushboo Gogri, Mr. Shirke Shubham, Mr. Patel Kashish



Winner at Hackathon DJSCOE

Direct Second Year Computer Engineering students, Mihir Daka and Nishank Sidhpura won 1st place in the “CodeShastra 7.0” hackathon organized by CSI Chapter of Dwarkadas J. Sanghvi College of Engineering, Mumbai on 13th – 14th March 2021.

CodeShastra hackathon is Mumbai’s first 24-hour college-level hackathon whose aim was to provide a platform for the participants as they work in synergy to devise ingenious solutions to tackle various real-life problems in the domain of ML/AI, Blockchain, Cloud Computing, IoT, App Development, etc.

In a team of four direct second-year students, Mihir Daka (SE Div B) and Nishank Sidhpura (SE Div B) collaborated on providing a solution to the problem statement of creating an inquiry portal for lost and found items, and developed an application called “Lost and Found”.

The app serves as a place for the losers and finders of personal belongings to come into contact with each other securely, based on a custom developed pattern matching algorithm which takes into account the numerous details provided in the posts made about the lost or found items such as the description, location, date and time, etc. and matches the appropriate loser and finder to minimize false claims and help the users to resolve their problem with ease.



CERTIFICATE OF ACHIEVEMENT

THIS IS PRESENTED TO

Mihir Daka

FOR WINNING 1ST POSITION AT CODESHAstra 7.0
CONDUCTED BY THE CSI CHAPTER OF DWARKADAS J.
SANGHVI COLLEGE OF ENGINEERING (DJCSI), HELD
ONLINE ON 13TH-14TH MARCH, 2021

DR VINAYA SAWANT

BRANCH COUNSELLOR, DJCSI
HEAD OF I.T. DEPARTMENT



CERTIFICATE OF ACHIEVEMENT

THIS IS PRESENTED TO

Nishank Sidhpura

FOR WINNING 1ST POSITION AT CODESHAstra 7.0
CONDUCTED BY THE CSI CHAPTER OF DWARKADAS J.
SANGHVI COLLEGE OF ENGINEERING (DJCSI), HELD
ONLINE ON 13TH-14TH MARCH, 2021

DR VINAYA SAWANT

BRANCH COUNSELLOR, DJCSI
HEAD OF I.T. DEPARTMENT

Congratulations

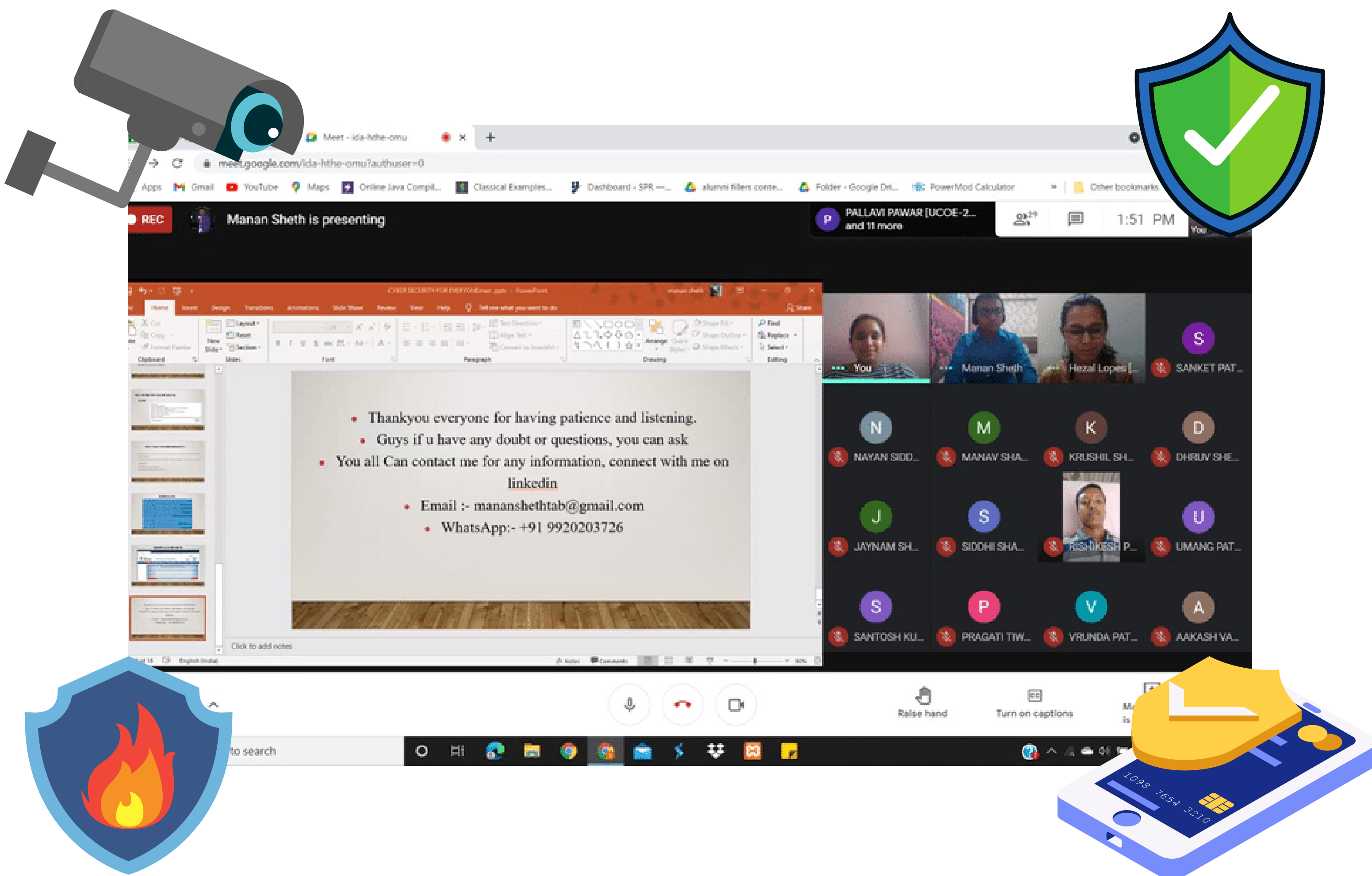
Webinar on “Cyber Security as a Career Choice”

The Department of computer engineering in association with CESA had conducted a webinar on “Cyber Security as a Career Choice” by Mr. Manan Sheth who is an alumnus of UCoE and currently Pursuing an MBA in Cybersecurity Management IMS, NFSU, Gandhinagar. The webinar was organized for third-year computer engineering students on Monday 16th April 2021. More than 90 students attended the session.

Information Security is related to maintaining the confidentiality of information. If a confidential feature of information is lost, then overall information becomes meaningless. Thus the reason that information security is now a day the latest trend in the field of technology to overcome the problem of cybercrime can be well understood.

Most of the different sectors are saturated whilst there is a need for qualified cybersecurity practitioners in INDIA. Then he discussed different types of cybercrime like Email Frauds, social media crimes, mobile-related crimes, Lottery scams, online transaction frauds and so on.

Further he shared tips and safety measures for everyone. One should stop publishing personal sensitive information on any social media. Printers wifi web cams should be shut down when not in use. Wifi should be always protected by secured password. Install spyware and antivirus and keep them updated. Then he described different cyber laws and at the end he explained how to report cybercrime. Presentation ended with question answer session.

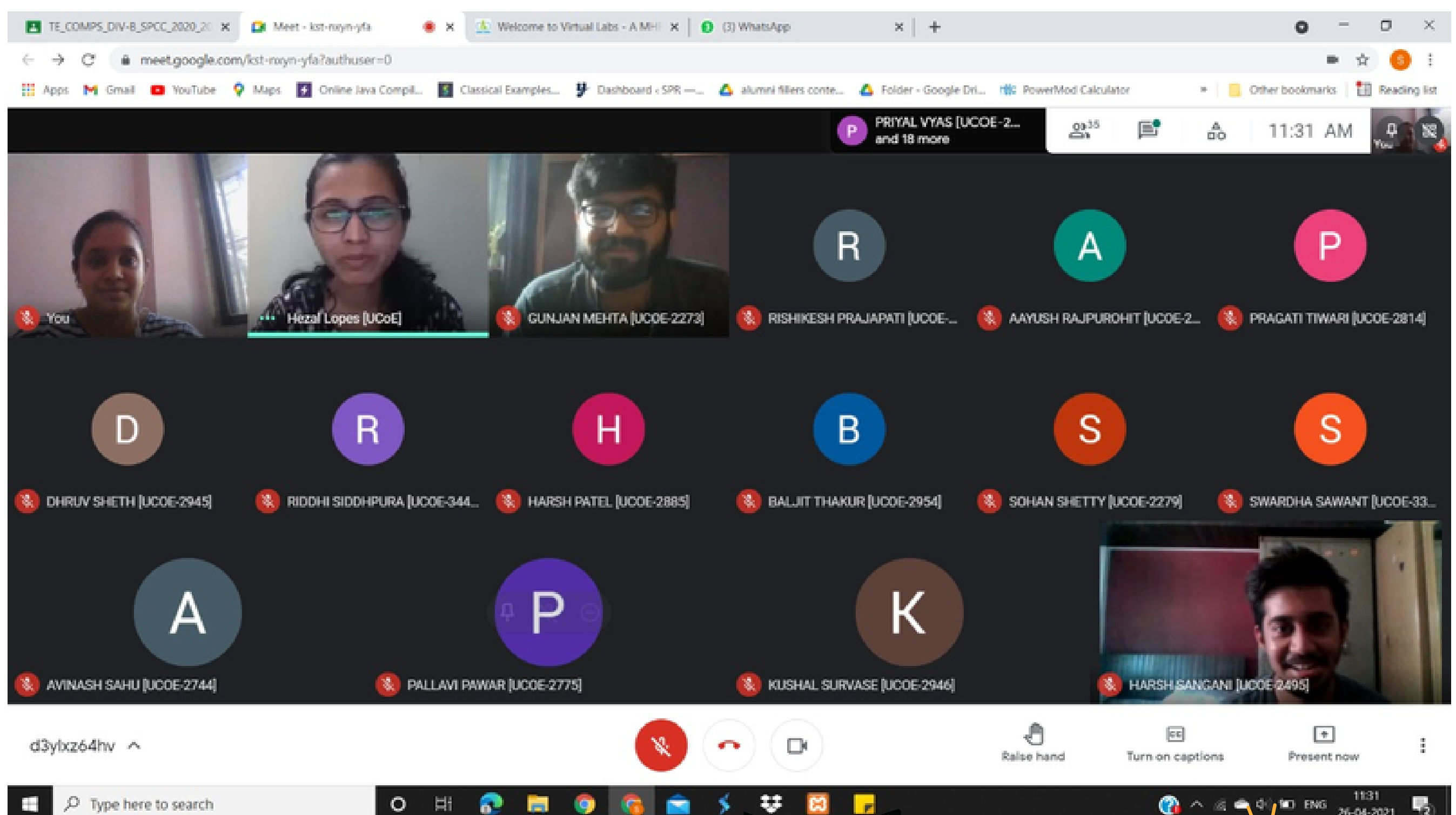


Webinar on “Use of Compiler in Natural language Programming”

Department of computer engineering in association with CESA had conducted a webinar on “Use of Compiler in Natural language programming” by Final year computer students Gunjan Mehta and Harsh Sangani. The webinar was organized for third-year computer engineering students on Monday 26th April 2021. More than 90 students attended the session.

Harsh and Gunjan showed processing of language through different phases like Morphological Analysis, Syntactical Analysis, Semantic Analysis, Discourse Analysis, and Pragmatic Analysis. They conducted a Virtual Lab session on Natural language processing hosted by the Indian Institute of Technology Hyderabad emphasizing the processing of Hindi Language-Indian Regional Language.

Lexical Analysis is an important phase that is used to generate different tokens from a given sentence. Morphology is a branch of linguistics that focuses on the way in which words are formed from morphemes. There are two types of morphemes namely lexical morphemes and grammatical morphemes. Gunjan explained morphology to students with the help of a virtual lab with a live demonstration and gave them brief gist of the N-gram Language model. POS tagging and chunking were covered by Harsh Sangani. POS tagging is the process of marking up a word in a corpus to a corresponding part of a speech tag, based on its context and definition and chunking is used to extract information from text such as Locations, Person Names etc. Over all session was good and interesting.

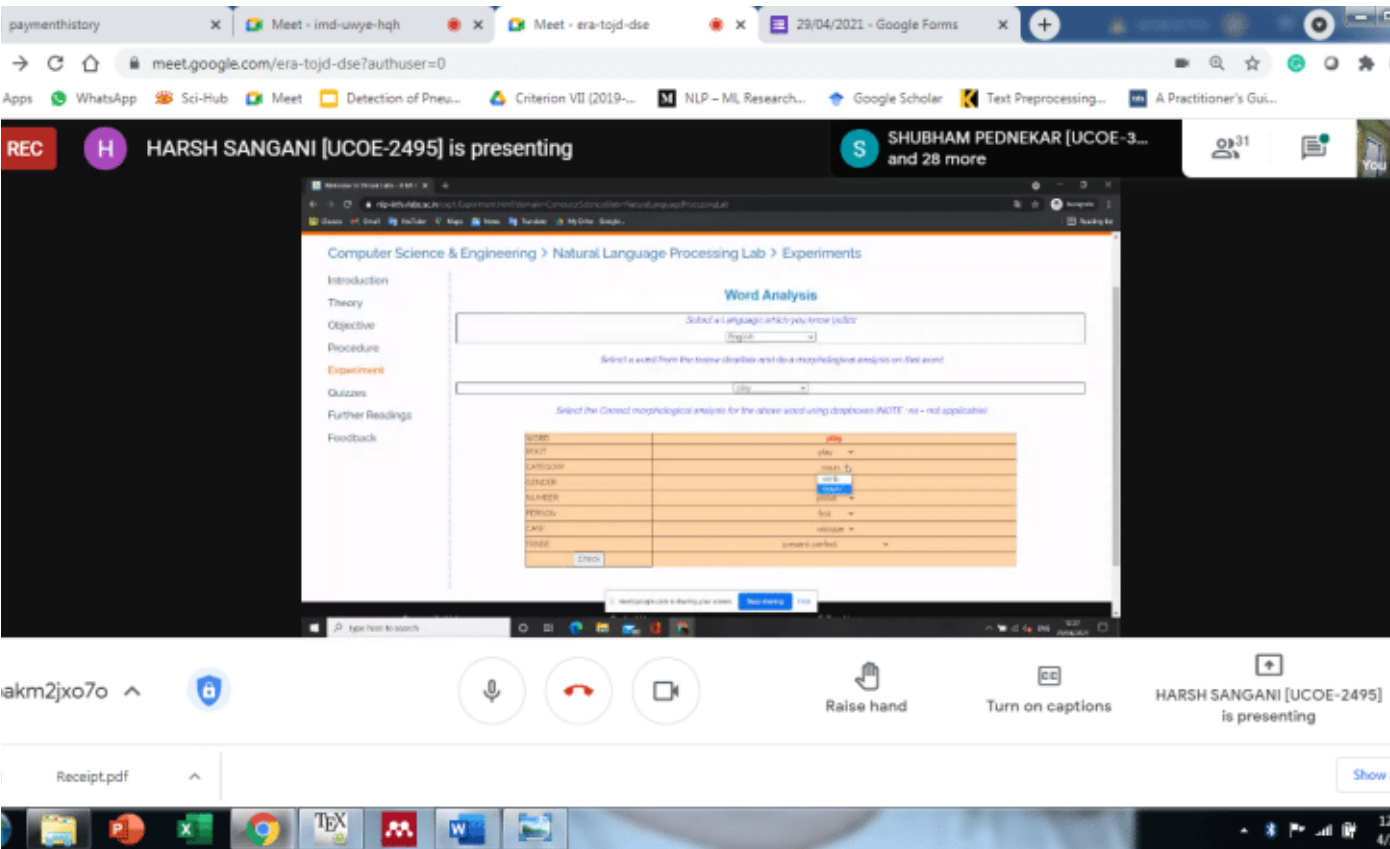
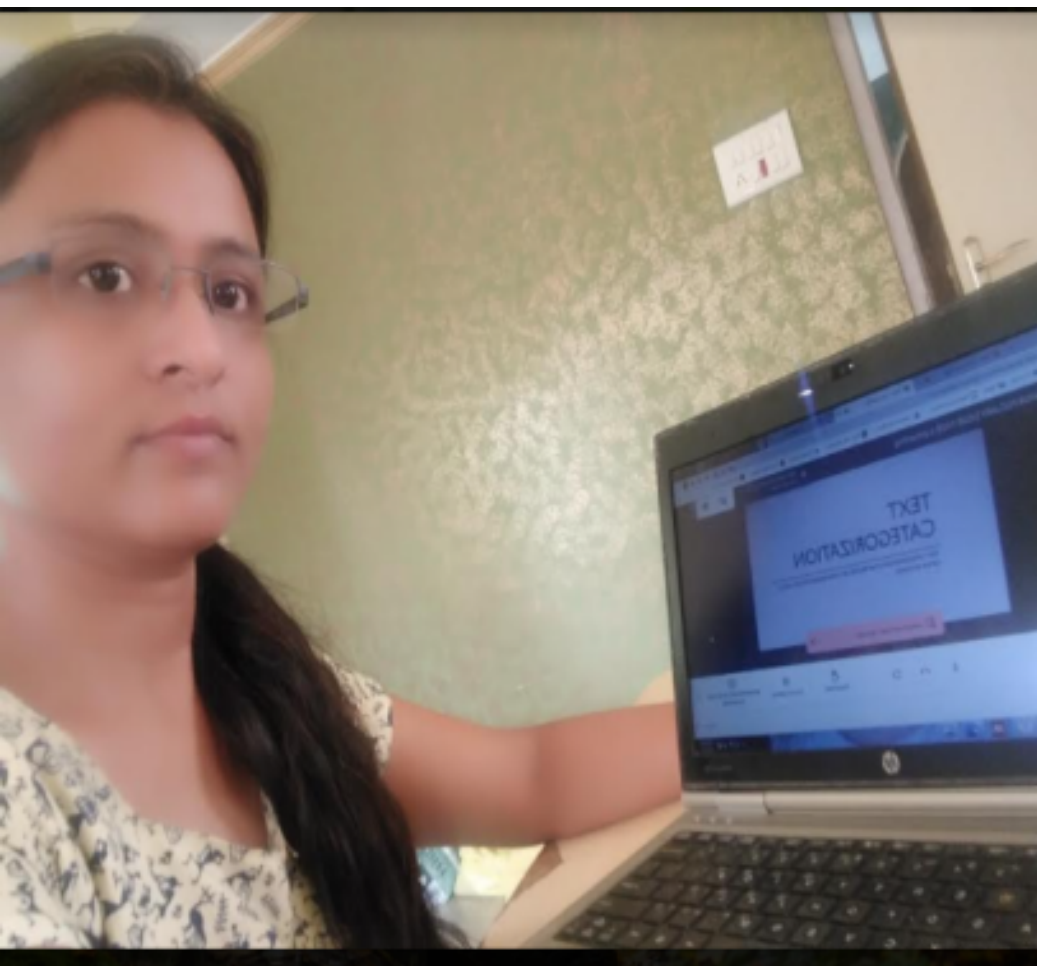
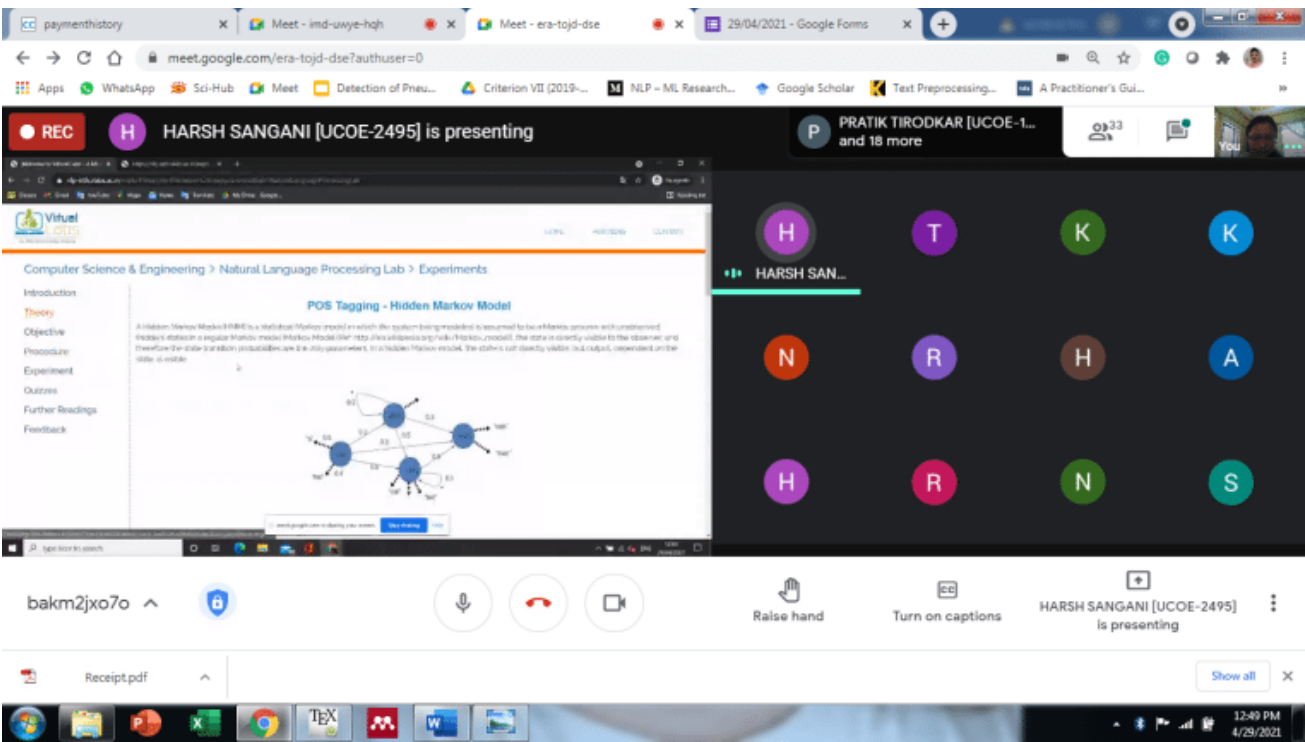


Virtual Lab Session on "Natural Language Processing"

The department of Computer Engineering organized a Virtual Lab session hosted by the Indian Institute of Technology Hyderabad emphasizing the processing of Hindi Language-Indian regional Language on 29/04/2021. Mr.Harsh Sanghani showed processing of language through different phases like Morphological Analysis, Syntactical Analysis, Semantic Analysis, Discourse Analysis, and Pragmatic Analysis.

List of Experiments covered under Natural Language Processing Lab:

- 1. Word Analysis
- 2. Word Generation
- 3. Morphology
- 4. N-Grams
- 5. N-Grams Smoothing
- 6. POS Tagging: Hidden Markov Model
- 7. POS Tagging: Viterbi Decoding
- 8. Building POS Tagger
- 9. Chunking
- 10. Building Chunker

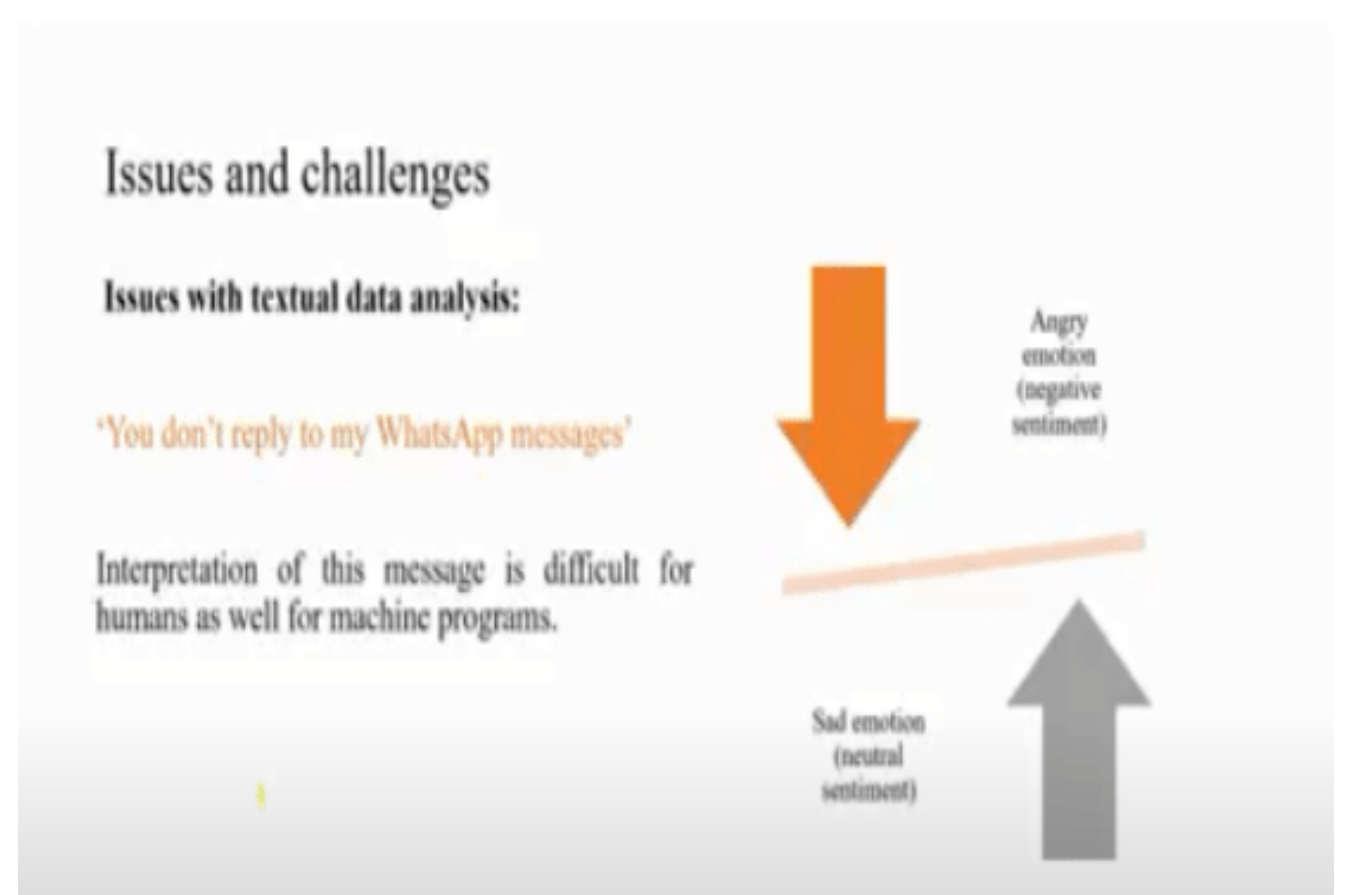
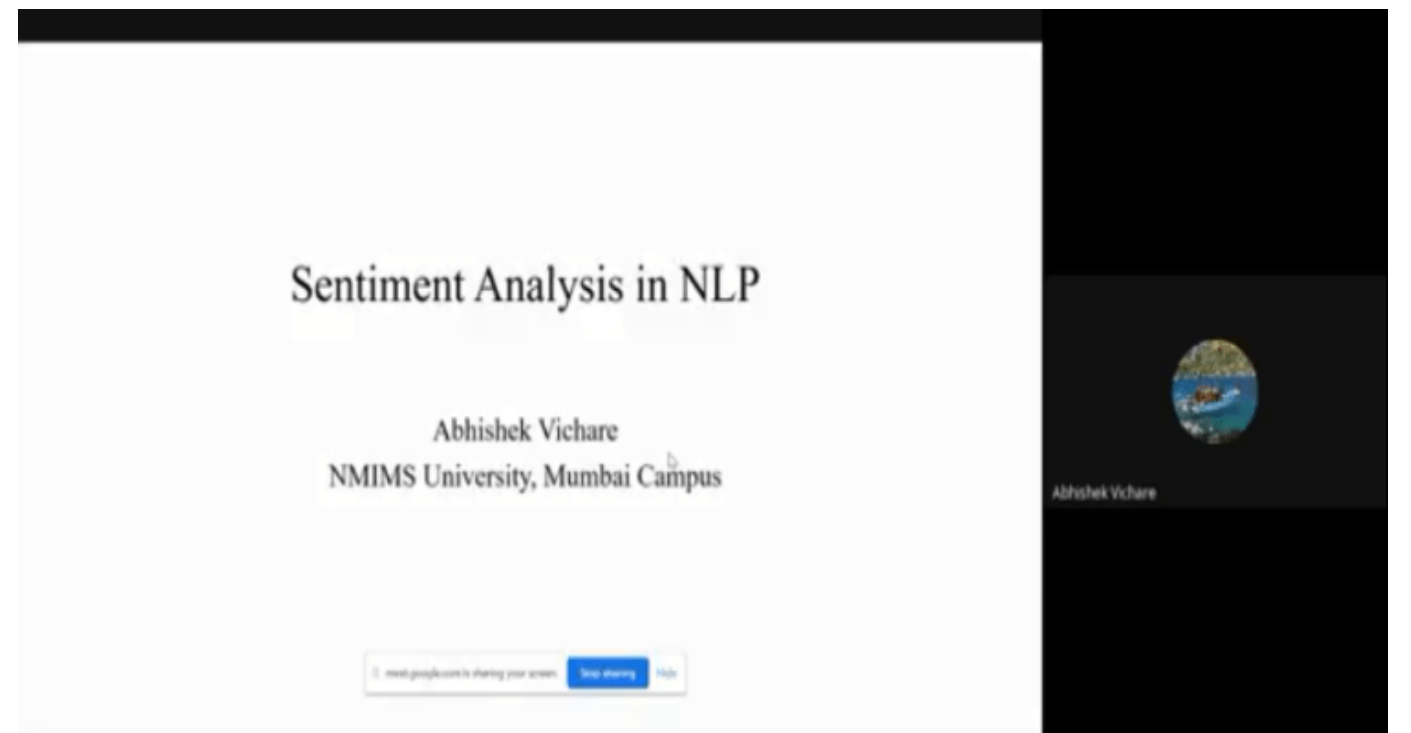
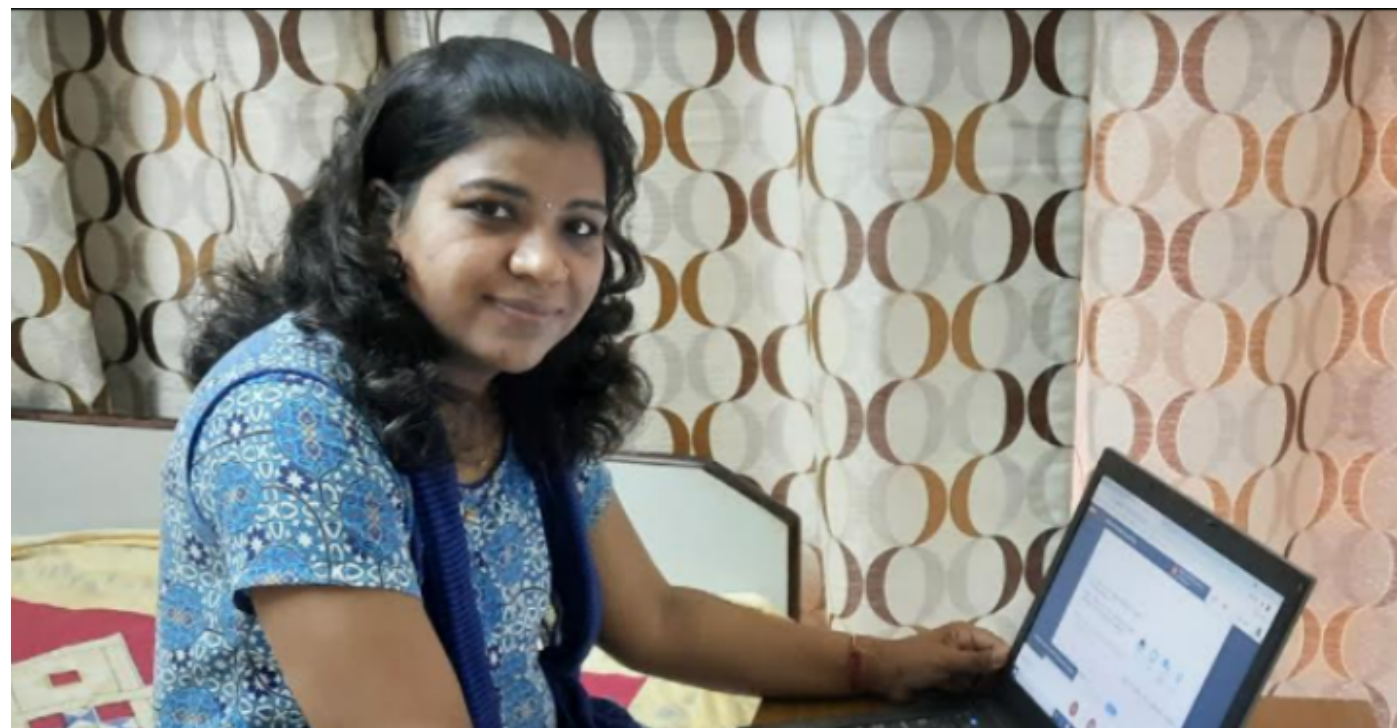
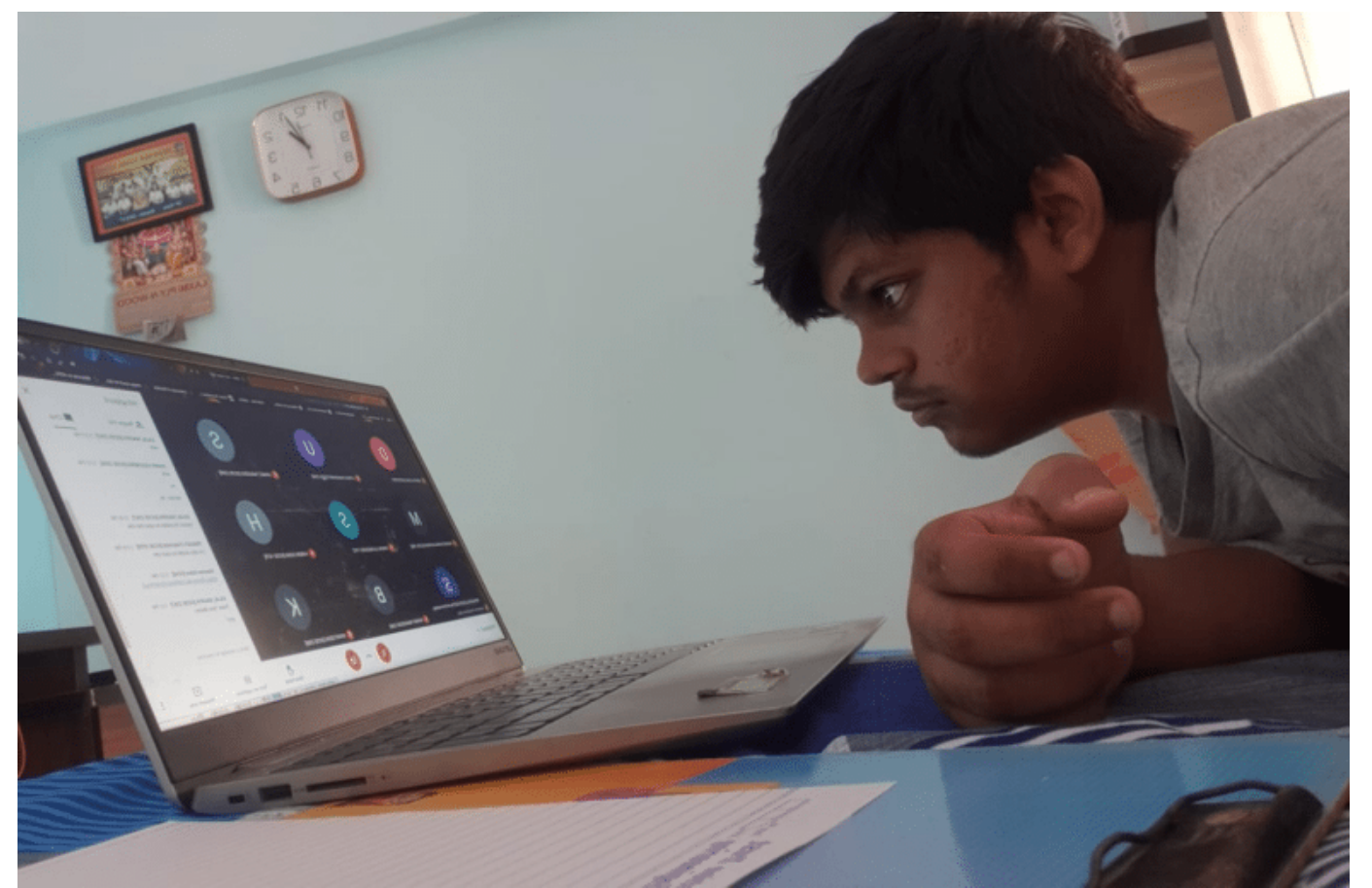
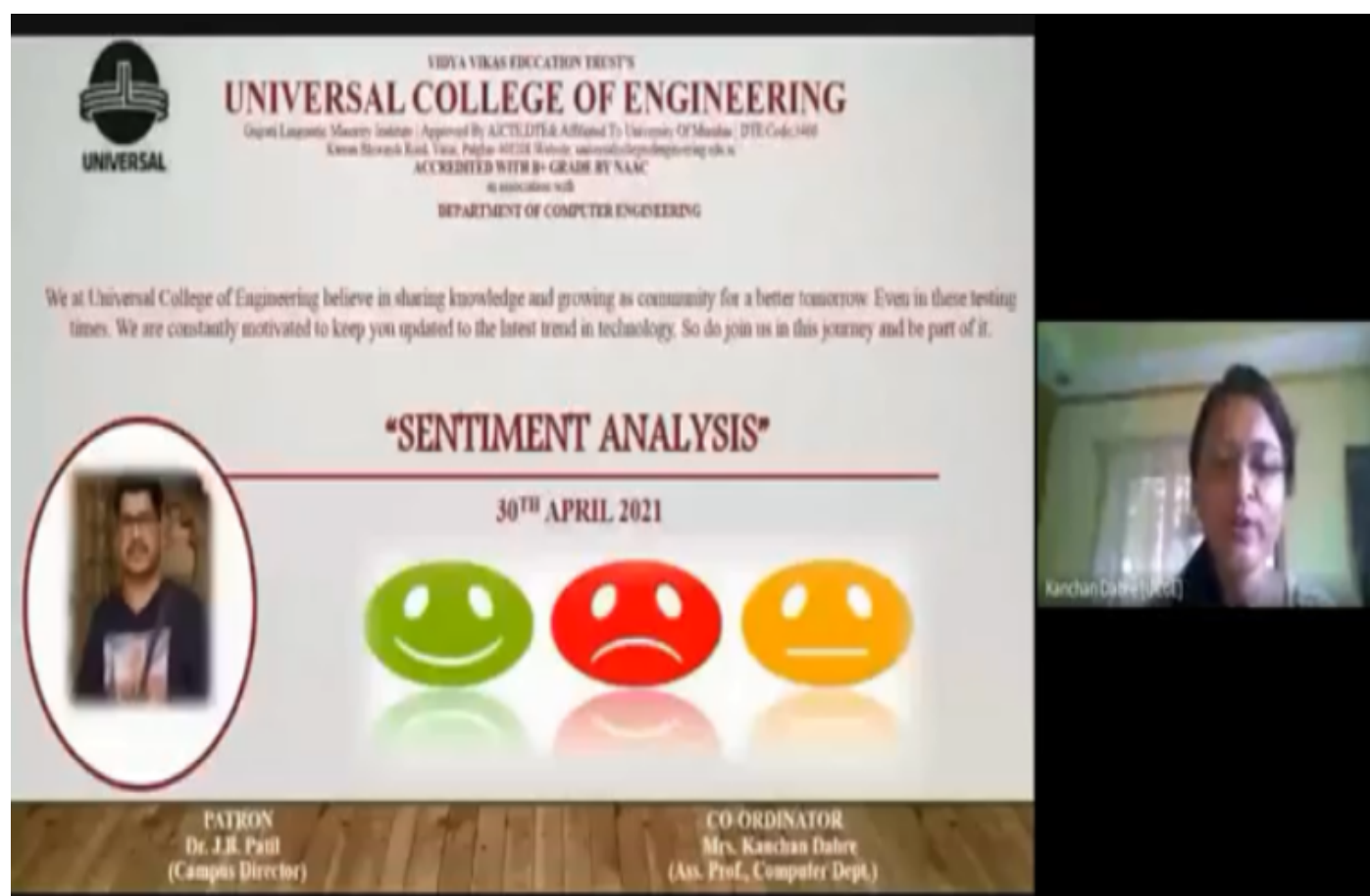


Expert talk on "Sentiment Analysis"

The department of Computer Engineering had organized an Expert session on "Sentiment Analysis" used in the processing of Natural Language on 30/04/2021. Prof. Abhishek Vichare showed phases of sentiment analysis, applications of Sentiment analysis, types of sentiment analysis, issues in sentiment analysis, and the importance of sentiment analysis is a very much simplified and interactive way with a lot of real-time examples. 64 students from BE Computer engineering and 41 outsiders (students and faculties from other branches and years) attended this session.

Recording:

<https://drive.google.com/file/d/1WeMxVFfcbgIINXEcDrxXQo0wM5Qm3hW-/view>



Session on “Guidelines on project thesis writing”

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Class: BE Computer

Date:17/04/2021

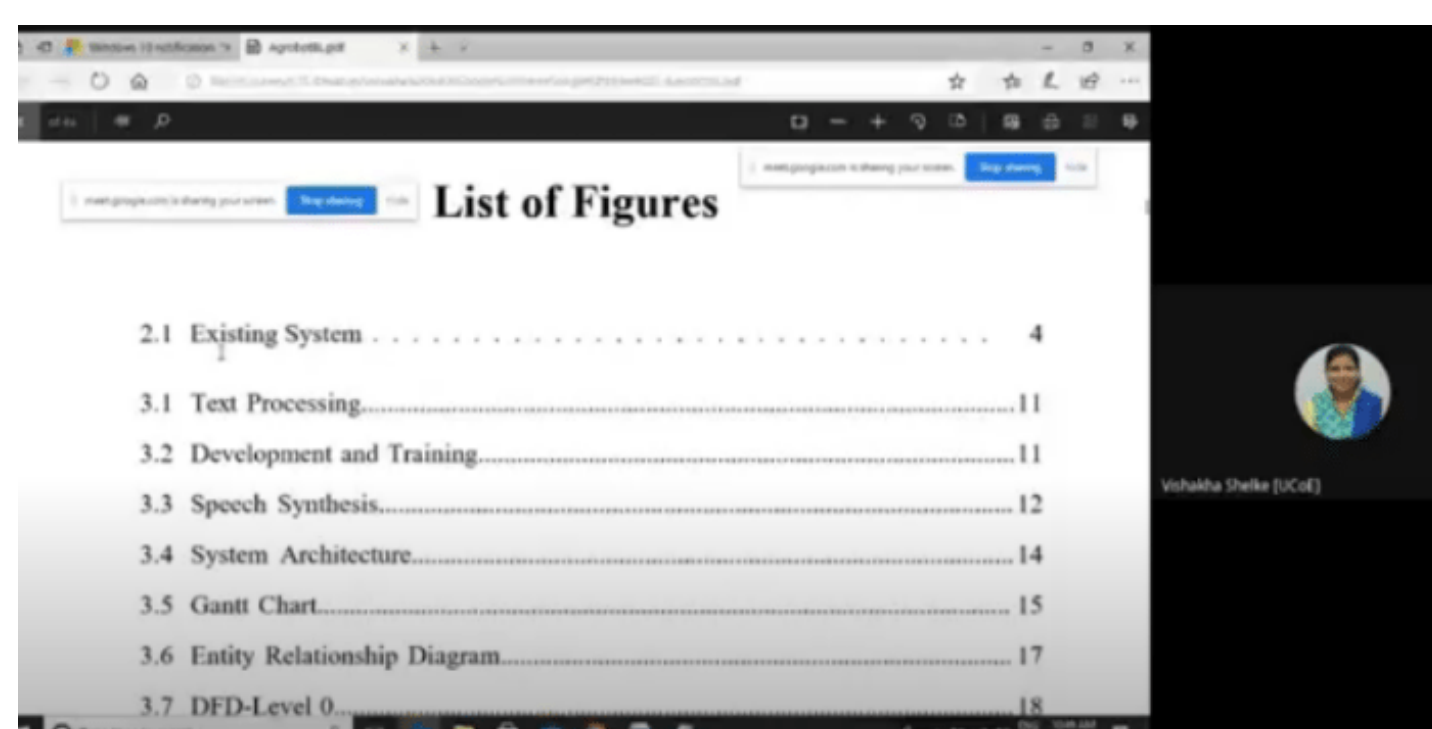
Department of Computer engineering had conducted a session on “Guidelines on project thesis writing”. This session was organized for Final year students on 17 April 2021 from 10 to 11:30 am, Total of 86 students attended the session.

Mrs. Vishakha Shelke, Project coordinator delivered the session under the guidance of Dr. Jitendra Saturwar, Head of the Computer Engineering department. In this session, Mrs. Vishakha Shelke gave brief information about the guidelines of the University of Mumbai regarding BE thesis writing. She explained how to organize the project thesis. She explained the content of the Title page, certificate page, declaration, Majorproject approval page, number of chapters, starting with Introduction and ending with Conclusions followed by Appendix, Acknowledgement.

Mrs. Vishakha Shelke taught the students, how to apply page numbering style for initial pages and page number style for chapters. The thesis contains different formatting guidelines for the Chapter and Section Format. A chapter can be divided into Sections, Subsections, and Sub-sub Sections so as to present different concepts separately. Table number and title will be placed above the table while the figure number and caption will be located below the figure.

She explained what contents to be included in Table of contents, how to represent figures and tables in list of figures and List of tables. She gave the guidelines regarding how to write list of abbreviation.

She explained how to write Literature survey and proposed system with all fundamental, data model and UML diagrams. All students must include the test cases and known issues. In Result and discussion she guided regarding how to write explanation of snapshots of Project , Result in table and Result in graph.



The screenshot shows a Google Classroom interface. On the left, a document titled 'List of Figures' is displayed, showing a table of contents for a project thesis. On the right, a video feed shows Mrs. Vishakha Shelke, the project coordinator, speaking during the session.

Figure Number	Figure Title	Page Number
2.1	Existing System	4
3.1	Text Processing	11
3.2	Development and Training	11
3.3	Speech Synthesis	12
3.4	System Architecture	14
3.5	Gantt Chart	15
3.6	Entity Relationship Diagram	17
3.7	DFD-Level 0	18

She told all students must include their published certificate and published paper in publication section. All guidelines were explained with previous year sample reports.

After the session students asked the queries regarding the guidelines. Session was interactive as students cleared their doubts regarding contents and format of thesis. This session was very helpful for students to understand the insights of the project thesis writing in detail. All contents of this session and recording link was shared to students on BE Majorproject google classroom for further reference.

Recording link :

https://drive.google.com/file/d/1IJvLUpSAJlLk5c7LvbihfjdW7_ACKHN/view

Session on "How to write Literature Survey?"

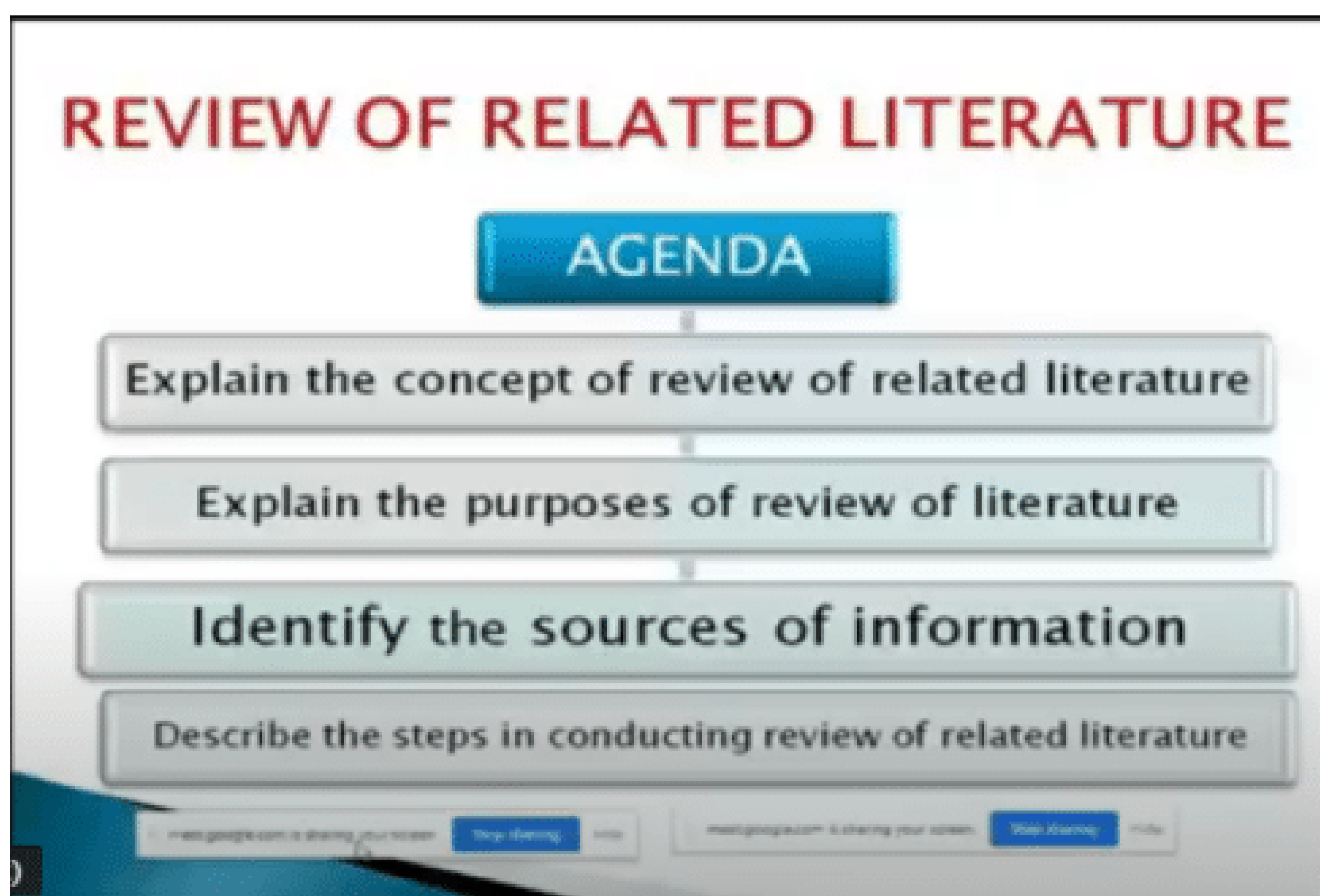
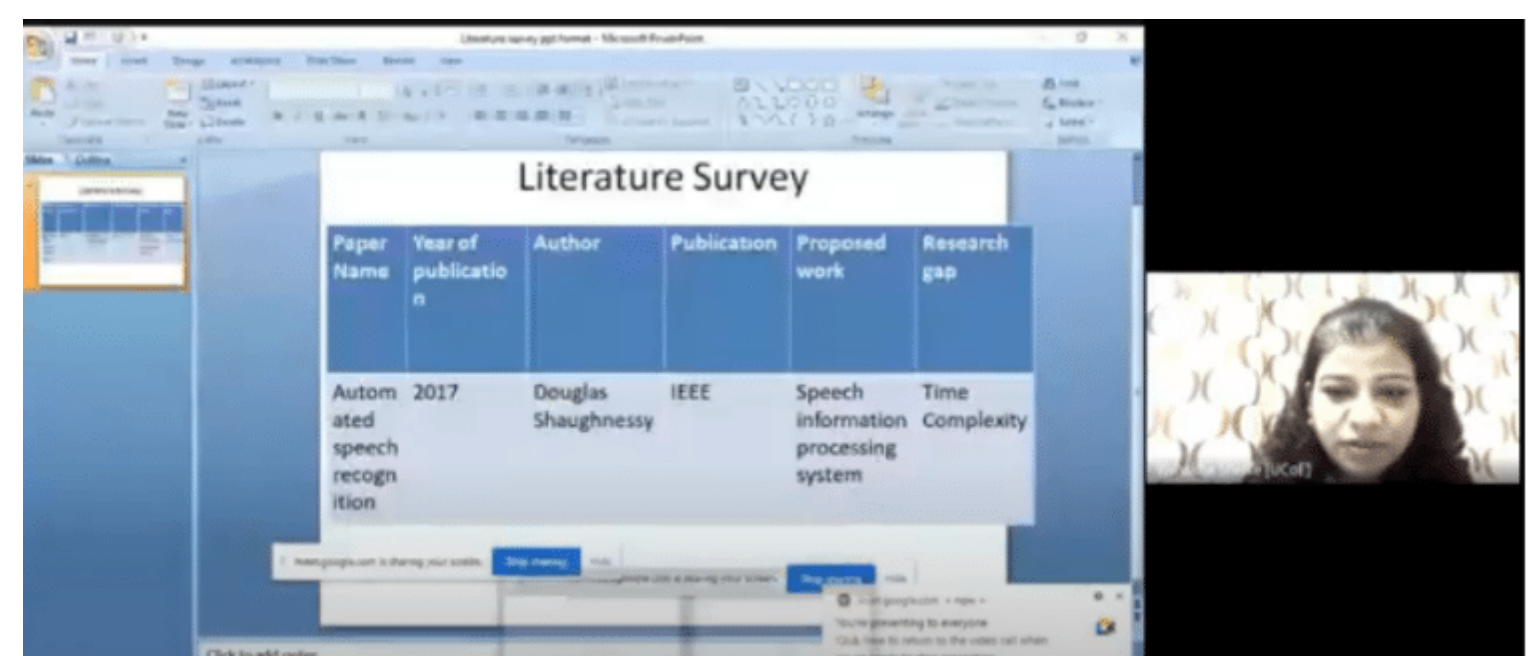
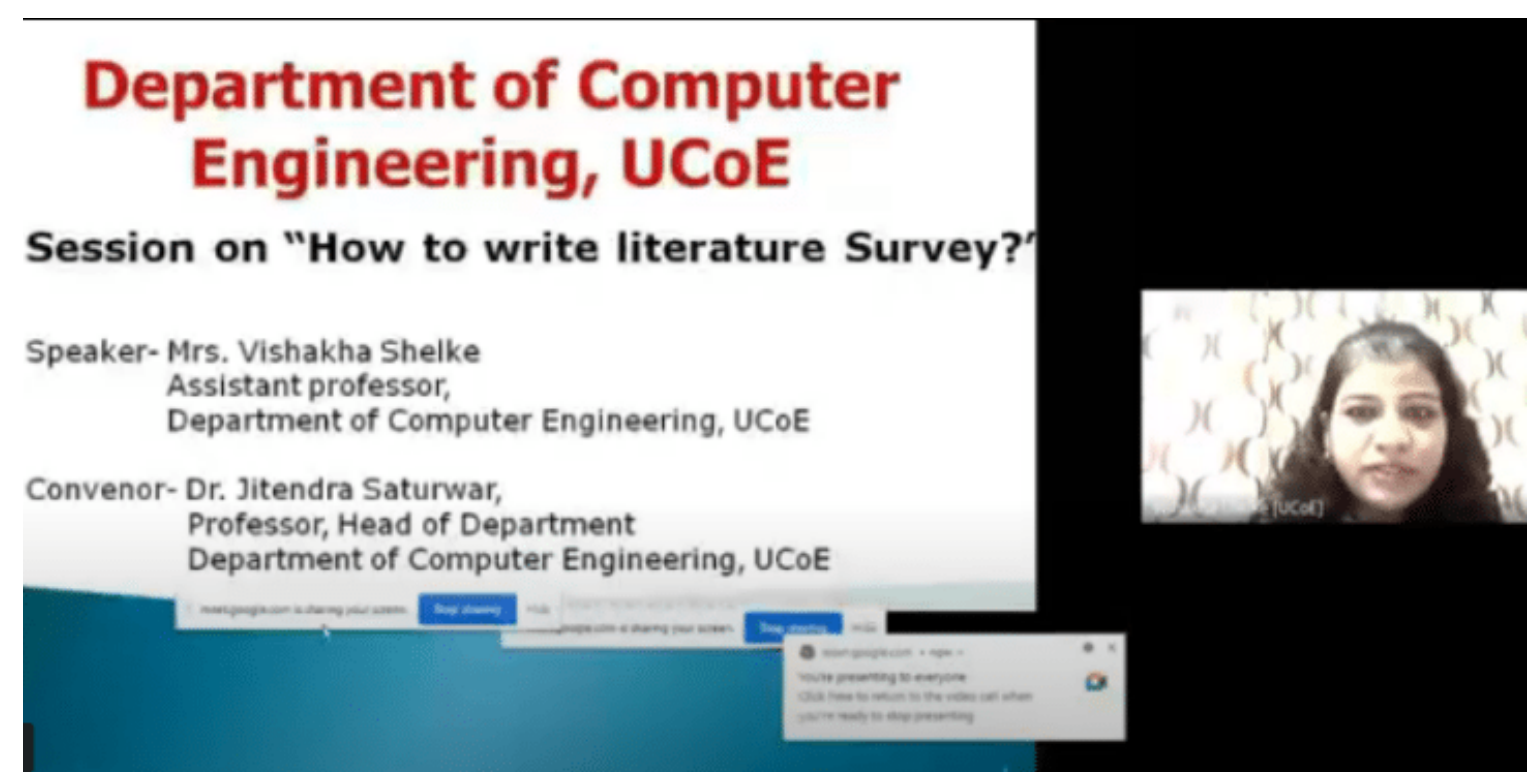
Class: TE Computer

Date: 24/04/2021

Department of Computer engineering conducted a session on "How to write Literature survey" in Project work for Third-year students on 24 April 2021 from 10 to 11:30 am, Total of 75 students, attended the session. Mrs. Vishakha Shelke, Project coordinator delivered the session under the guidance of Dr. Jitendra Saturwar, Head of the computer engineering department. In this session Mrs. Vishakha Shelke, gave brief information about the Concept of Literature survey, what is the purpose behind conducting a literature survey? How it is useful to define the research problems.

Mrs. Vishakha Shelke explained how we can identify the search terms for searching the relevant papers for literature survey. Different types of sources like primary, secondary and preliminary were explained with the help of examples. In this session, she elaborated the how to identify key words to guide the search, how to write abstract information.

She explained how present the analysis done in survey in report, in PowerPoint with the sample research paper. The session was interactive where students learned the insights of Literature survey for research.



Publications in Conferences

Mr. Gunjan Mehta, Ms. Prajakta Gomase, and Ms. Trisha Bangera, students of BE Computer Engineering along with their project guide Mrs. Vishakha Shelke presented their research paper based on BE project topic “Searchious: Finding missing people using an optimized face recognition algorithm” on April 10, 2021, at Scopus Indexed IEEE Conference, 5th IEEE International Conference on Computing Methodologies and Communication [ICCMC 2021] organized by Surya Engineering College, Erode, India.

This research was based on developing a face recognition system that was optimized and assisted in easing the process of tracing missing people by automating it entirely. The algorithm was developed using k-nearest neighbors and the system of Searchious adopts a hybrid approach where there is a desktop app developed using Python and a mobile app was developed for Android phones. The attained accuracy was 60% which by far is the best when tested alongside other algorithms.



Congratulations

Publications in Conferences

Mr. Rajat Dungarwal, Mr. Vyom Makwana, and Mr. Keyur Babariya, students of BE Computer Engineering along with their project guide Mrs. Vishakha Shelke presented their research paper based on BE project topic **“Thing Translator: An Efficient Way to Classify Different Things”** on April 29, 2021, at International Conference on Smart Data Intelligence (ICSMDI 2021) organized by Kongunadu College of Engineering and Technology, Trichy, Tamil Nadu, India.

This research was based on developing an image recognition/classification model which converts the image into text and further, the text gets converted into speech using TTS engine for all the common citizens to know multiple objects in different languages and also for the young students for e-learning so that the students understand the pronunciation of that word better without any internet connection. Our algorithm was developed using Convolutional Neural Network (CNN) and the system of Thing Translator is a mobile app developed for Android phones. The attained accuracy for the model was around 85%.



CONGRATULATIONS

Publications in Conferences

Mr. Shubham Shirke, Ms. Khushboo Gogri and Mr. Kashish Patel, students of BE Computer Engineering along with their project guide Mrs. Vishakha Shelke presented their topic of **“Depressscape: Depression Monitoring Through Social Media”** on April 29, 2021, at the International Conference on Smart Data Intelligence (ICSMDI 2021) organized by Kongunadu College of Engineering and Technology, Trichy, Tamil Nadu, India.

This research was based on developing a system which detects depression in user so that the user can start treatment at early stages. This system collects data from user's social media account. The algorithm used to develop the system are SS3 and Deep CNN for sentiment analysis and the mobile app is developed. The accuracy attained for text analysis is 72% and for image sentiment analysis is 83% which is best when compared with other algorithms.



CONGRATULATIONS

Publications in Conferences

Mr. Aaditya Kadam, Mr. Tejas Gudulekar and Mr. Mihir Mule, students of BE Computer Engineering along with their project guide Mr. Sridhar Iyer had presented their topic **“Vault Chain: Encrypted Vault using Blockchain”** on April 24th, 2021 International Conference on Computer Science, Machine Learning and Artificial Intelligence (ICCSMLAI) held in Navi Mumbai, India.

This research was based on developing a system that could protect data communication over the insecure medium with the help of decentralized Blockchain mechanisms. The files could be stored in a virtual locker mechanism called as Vault Chain.



Publications in Journals

Ms. Dikshita Pant, Ms. Anjali Singh, and Mr. Pratik Tirodkar, students of BE Computer Engineering along with their project guide Mr. Sridhar Iyer had submitted their research paper titled **“Resource Management System for Military Force using concepts of Blockchain Technology”** in the International Journal of Creative Research Thoughts (IJCRT), an International Open Access Peer Reviewed Journal.

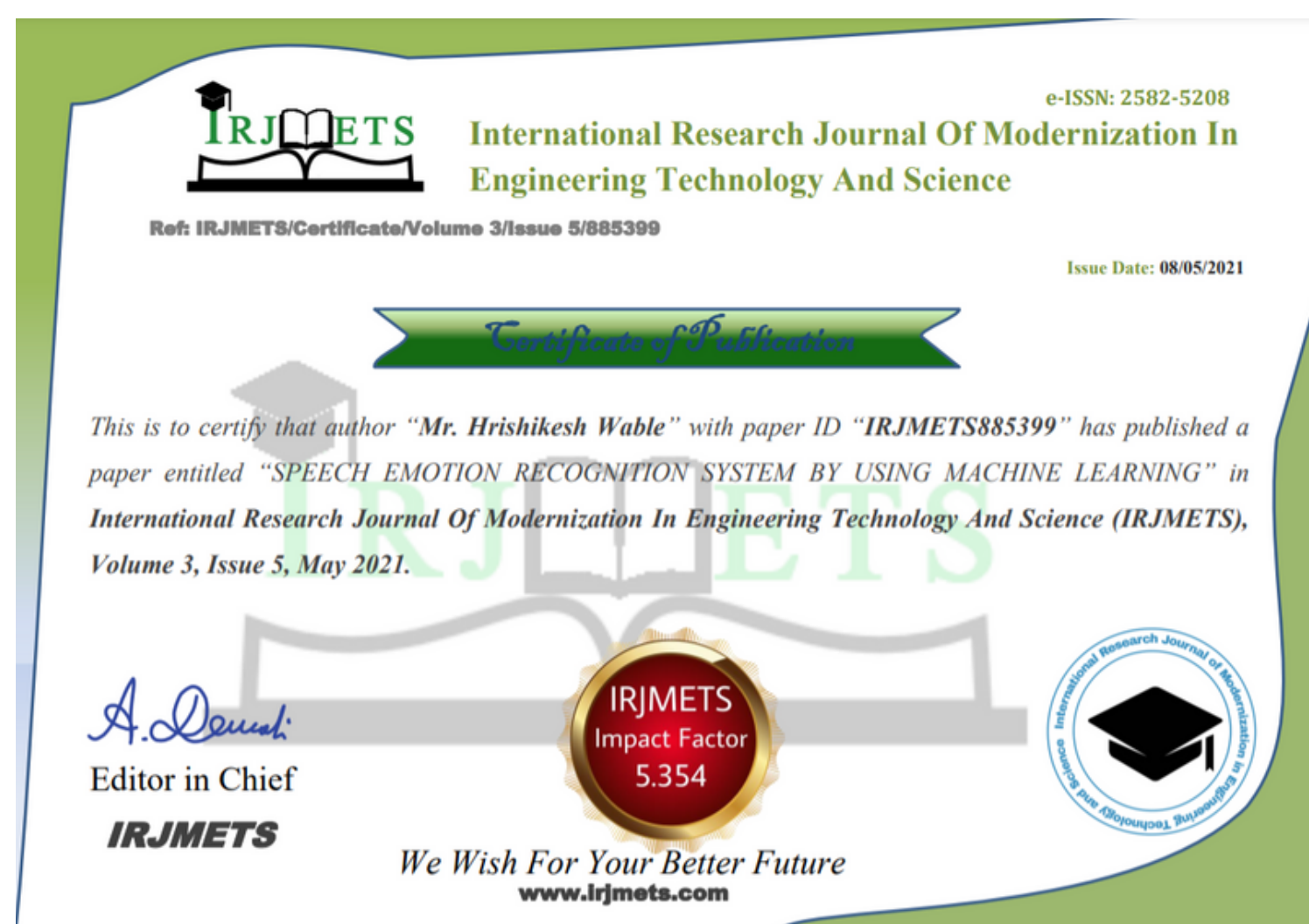
This research was based on developing a system that could protect data communication over the insecure medium with the help of decentralized Blockchain mechanisms. Highly sensitive military-grade secrets could be secured using such a system.



Publications in Journals

Mr. Hrishikesh Wable, Mr. Hiren Satwara, and Mr. Purvesh Gosalia, students of BE Computer Engineering along with their project guide Mr. Sridhar Iyer had submitted their research paper titled **“Speech Recognition System by using Machine Learning”** in the International Research Journal of Modernization in Engineering Technology and Sciences (IRJMETS), an International Peer Reviewed Journal.

This research was based on developing a system that could detect the emotions of a particular individual with the help of Machine Learning Techniques.



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