SHAHEED SUKHDEV COLLEGE OF BUSINESS STUDIES

UNIVERSITY OF DELHI

ACM SSCBS

ANNUAL Report

of the **SSCBS**

2020 - 2021

Reported by
**Muskan Goyal**
ACM Coordinator

About ACM

ACM, the Association for Computing Machinery is the world's largest educational and scientific computing society, uniting educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

With nearly **110,000** members from more than 190 countries, ACM works to advance computing as a science and a profession.
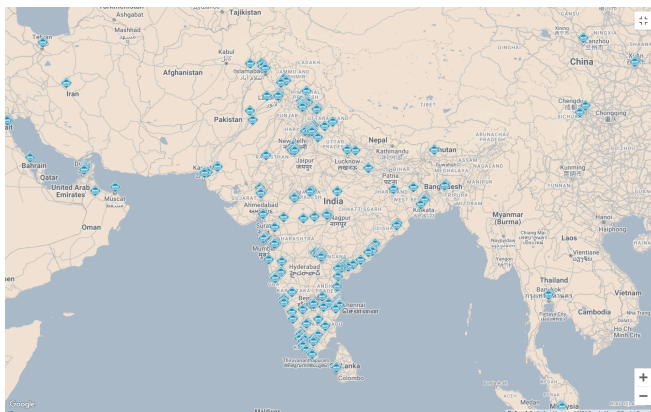
Indian Network of ACM
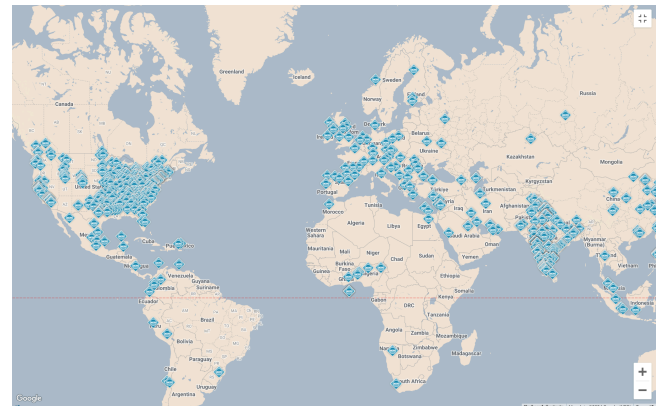
Worldwide Network of ACM

ACM Official Website: https://www.acm.org/

# SSCBS ACM Student Chapter - Reporting Year 2020-21

Faculty In charge(s):

1. Dr. Anamika Gupta
2. Dr. Shikha Gupta

Our Research Articles Published:

**1. Analysis of COVID-19 Tracking Tool in India: Case Study of Aarogya Setu Mobile Application**

The research paper titled "Analysis of COVID-19 Tracking Tool in India: Case Study of Aarogya Setu Mobile Application" investigates the Aarogya Setu app developed by the Government of India. Authored by Manan Bedi, Prashi Goyal, Vaishnavi Verma, and Srishti Wadhera, the study explores the app's functionalities in utilizing Bluetooth and GPS technologies for COVID-19 contact tracing. It emphasizes the application's data science methodologies, including Classification, Association Rule Mining, and Clustering, to analyze the pandemic's spread within India. The paper suggests future enhancements integrating Artificial Intelligence and Computer Vision for improved patient detection, offering insights beneficial for healthcare professionals, policymakers, and technology experts. Access the full paper at https://dl.acm.org/doi/10.1145/3416088
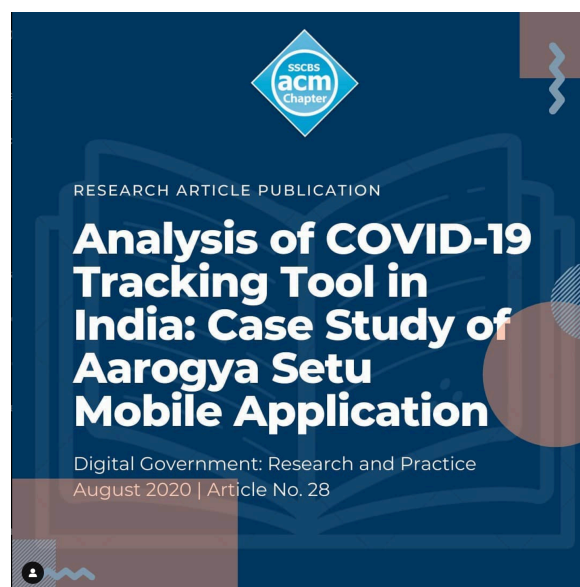
2. Engagement Analysis in MOOCs:

We are delighted to present two more groundbreaking research articles published in the esteemed magazine 'Adhyayan' of the Computer Society of India. The first article, "Engagement Analysis in MOOCs" offers insightful observations into Massive Open Online Courses (MOOCs) by examining user engagement patterns. Authored by our esteemed contributors, this study sheds light on the dynamics of learner interaction within online learning platforms, providing valuable insights for educators and e-learning platform developers.
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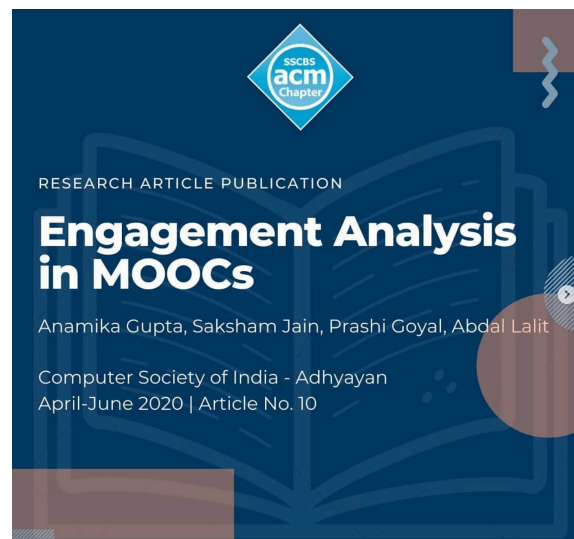
3. Texture Analysis Techniques in Image Processing

The paper delves into the realm of image processing, exploring advanced texture analysis methodologies. Authored by our distinguished researchers, this paper delves into innovative techniques for extracting texture features from digital images, with potential applications ranging from medical imaging to remote sensing. Both articles promise to enrich the academic discourse and contribute significantly to their respective fields.
You can access the articles from the following link:

http://www.csi-india.org/downloads/pdf/3/csi%20adhyayan%20apr%20jun%202020.pdf
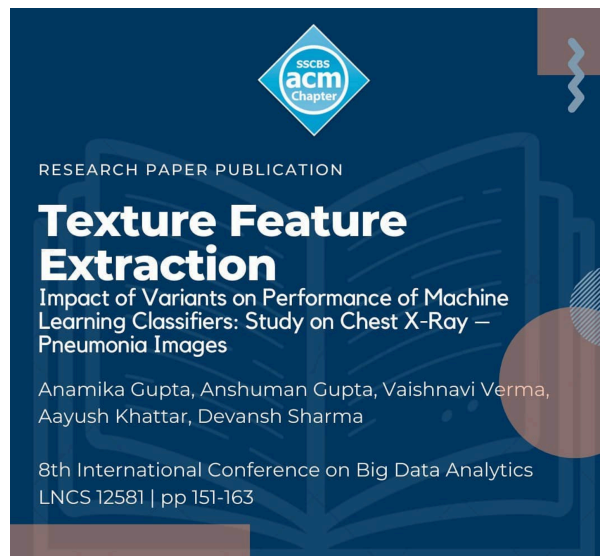
4. Texture Feature Extraction

We're excited to share our latest research paper, "Texture Feature Extraction," published in the esteemed journal SpringerLink. This study focuses on classifying Chest X-ray images using Machine Learning Classifiers and explores the impact of variations on classification outcomes. By extracting second-order statistical features and employing various image processing techniques, the paper shows significant improvements in classifier accuracy, F1-Score, and AUC on the Chest X-ray (Pneumonia) dataset. The findings promise advancements in medical image classification, with potential implications for diagnostic accuracy and patient care. Access the full paper at

https://link.springer.com/chapter/10.1007/978-3-030-66665-1_11

Gupta, A., Gupta, A., Verma, V., Khattar, A., Sharma, D. (2020). Texture Feature Extraction: Impact of Variants on Performance of Machine Learning Classifiers: Study on Chest X-Ray – Pneumonia Images.

RESEARCH PAPER PUBLICATION

Texture Feature Extraction
Impact of Variants on Performance of Machine Learning Classifiers: Study on Chest X-Ray – Pneumonia Images

Anamika Gupta, Anshuman Gupta, Vaishnavi Verma, Aayush Khattar, Devansh Sharma

8th International Conference on Big Data Analytics
LNCS 12581 | pp 151-163

5. Technology Applications for Health Safety Decision-making under COVID-19 Pandemic Management

The research explores the integration of technology applications in decision-making processes for health safety amidst the COVID-19 pandemic. By examining the intersection of technology and public health, the study aims to provide insights into effective pandemic management strategies. The significance lies in leveraging technological advancements to enhance decision-making, thus mitigating the spread of the virus and safeguarding public health. This research contributes valuable knowledge to inform policymakers, healthcare professionals, and public health authorities in their efforts to combat the pandemic effectively.

Link: https://ieeexplore.ieee.org/abstract/document/9317205

Gupta, R., Pal, S. K., Khattar, A., & Baliyan, K. (2020, November). Technology applications for health safety decision making under COVID-19 pandemic management. In *2020 International Conference on Decision Aid Sciences and Application (DASA)* (pp. 788-793). IEEE.

6. Understanding COVID-19: The Role of Computational Intelligence

This research delves into the role of computational intelligence in understanding COVID-19, offering insights into pandemic dynamics and mitigation strategies. By harnessing computational methods, the study aims to analyze complex data and patterns associated with the virus, aiding in prediction, prevention, and control efforts. The significance lies in the potential of computational intelligence to accelerate COVID-19 research, enabling rapid response and informed decision-making in public health interventions. This research contributes to the ongoing global effort to combat the pandemic by leveraging innovative approaches in data analysis and modeling.

Link: https://link.springer.com/content/pdf/10.1007/978-3-030-74761-9.pdf

Nayak, J., Naik, B., & Abraham, A. (Eds.). (2022). *Understanding COVID-19: The Role of Computational Intelligence*. Springer.

Webinars

1. Research in AI

We are excited to share insights from our recent session on "Research in AI," on 10th August 2020 where we explored various applications of Deep Learning for COVID-19 Management. This discussion delved into the innovative ways in which Deep Learning techniques are being utilized to address challenges posed by the pandemic, from forecasting infection rates to optimizing resource allocation. Attendees gained valuable perspectives on the role of AI in shaping public health strategies and mitigating the impact of COVID-19. This session provided a comprehensive overview of cutting-edge research in AI, highlighting its potential to drive transformative change in healthcare and beyond.
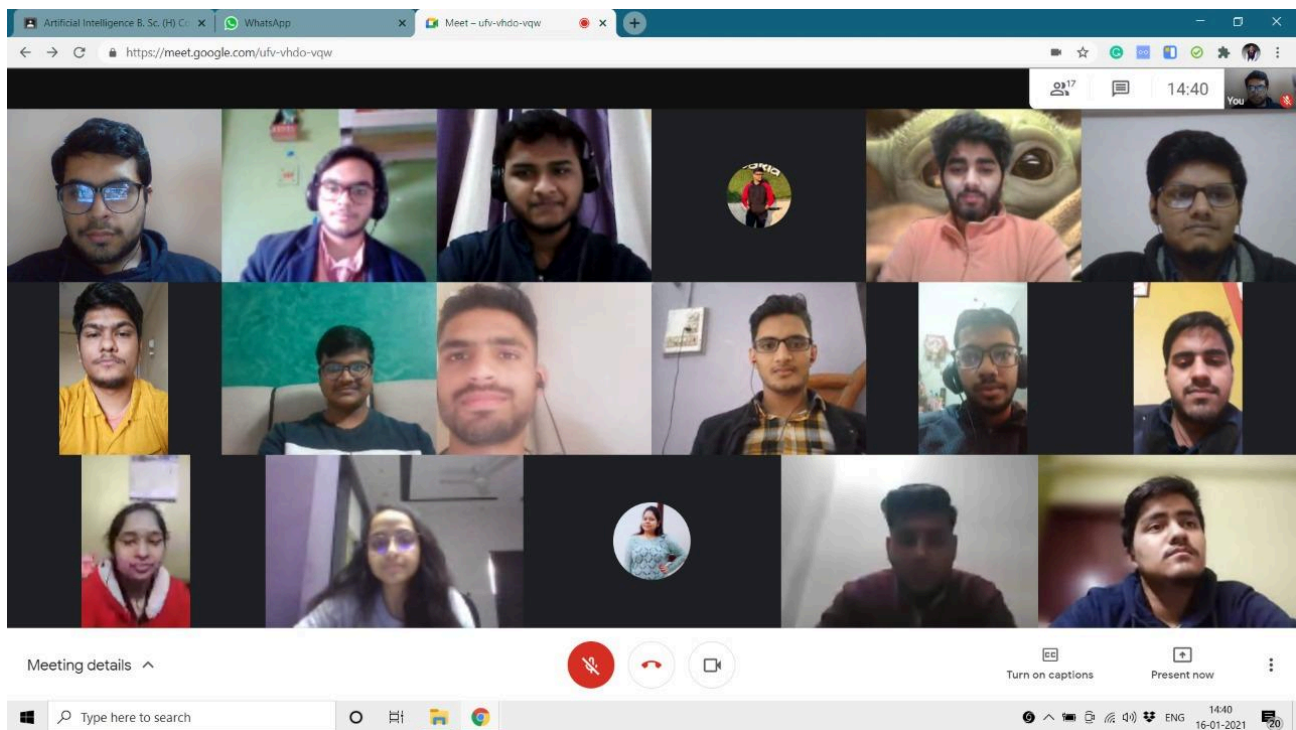
2. Webinar on Getting Started with ML

We hosted an informative webinar titled "Getting Started with ML" on August 10, 2020. The session featured an industry expert providing insights and guidance on initiating Machine Learning projects. Attendees had the opportunity to gain foundational knowledge and practical tips for embarking on their Machine Learning journey. This session likely provided valuable insights for individuals looking to delve into the field of ML.
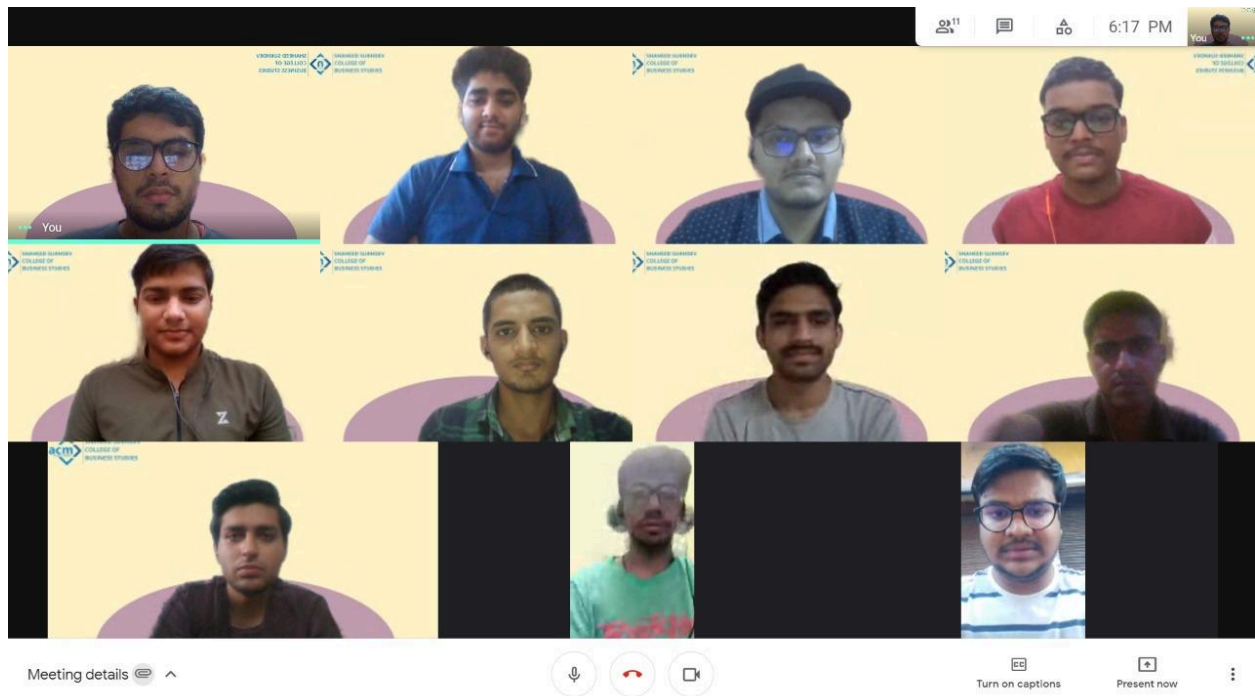
Achievements of the Society Members:

S.No	Name of the Student	Course and Year	Organizing University/College	Event Participated	Prize/ Participation
1.	Abdal Lalit	B.Sc. (H) Computer Science (3rd yr)	IIM Udaipur	Mantravat, National Case Study Competition	1st rank
2.	Manan Bedi	B.Sc. (H) Computer Science (2nd yr)	SGGSCC, Delhi University	Bug-Byte League Hackathon	2nd rank overall and most innovative project
3.	Manan Bedi	B.Sc. (H) Computer Science (2nd yr)	Mentor at GirlScript Summer of Code	GSSoC'21	
4.	Md Salik	B.Sc. (H) Computer Science (1st yr)	Hansraj College, University of Delhi	Cynosure'21	2nd rank

List of Student Members of the Society:

S.No	Name	Course and Year	Position Held
	Dr. Anamika Gupta		Teacher In-charge
	Dr. Shikha Gupta		Teacher In-charge
1.	Abdal Lalit	B.Sc. (H) Computer Science (3rd yr)	President & Co-Founder
2.	Saksham Jain	B.Sc. (H) Computer Science (3rd yr)	Vice-President & Co-Founder
3.	Anshuman Gupta	B.Sc. (H) Computer Science (3rd yr)	Secretary & Co-Founder
4.	Vaishnavi Verma	B.Sc. (H) Computer Science (3rd yr)	Treasurer & Co-Founder
5.	Prashi Goyal	B.Sc. (H) Computer Science (3rd yr)	Advisory Committee Member
6.	Aayush Khattar	B.Sc. (H) Computer Science (3rd yr)	Advisory Committee Member
7.	Paras Verma	B.Sc. (H) Computer Science (2nd yr)	Web Master
8.	Manan Bedi	B.Sc. (H) Computer Science (2nd yr)	Coordinator
9.	King Baliyan	B.Sc. (H) Computer Science (2nd yr)	Marketing Head
10.	Shefalika Ghosh	B.Sc. (H) Computer Science (2nd yr)	Research Head

11.	Ekansh Dhingra	B.Sc. (H) Computer Science (2nd yr)	Research Head
12.	Yash Patidar	B.Sc. (H) Computer Science (1st yr)	Organizing Committee Member
13.	Adarsh Kanojia	B.Sc. (H) Computer Science (1st yr)	Organizing Committee Member
14.	Alquab Raza	B.Sc. (H) Computer Science (1st yr)	Organizing Committee Member
15.	Ayush Gupta	B.Sc. (H) Computer Science (1st yr)	Organizing Committee Member
16.	Hemant	B.Sc. (H) Computer Science (1st yr)	Organizing Committee Member
17.	Siddhant	B.Sc. (H) Computer Science (1st yr)	Organizing Committee Member
18.	Md Salik	B.Sc. (H) Computer Science (1st yr)	Organizing Committee Member
19.	Yash Tamgadge	B.Sc. (H) Computer Science (1st yr)	Organizing Committee Member