



4th International Conference on Computing, Analytics, and Networks

ICAN 2024

SEPTEMBER 24-25, 2024 | CHITKARA UNIVERSITY, PUNJAB, INDIA

Jointly Organized by: **Chitkara University, Punjab and Chitkara University, H.P.**

Publication Partner: **Springer Nature**

Knowledge Partner: **Coursera for Campus**

Partner Technical Society Chapters: **Chandigarh ACM Professional Chapter and Chitkara ACM Chapter**

TECHNICAL PROGRAM

Day 1: September 24, 2024 | Hybrid Mode

Registration and Tea | 9:30 AM – 10:00 AM | Venue – Foyer, Einstein Hall, Galileo Block

Paper Presentations | 10:00 AM - 11:20 AM

Track 1.1 Advances in Computer and Information Technology (Physical Conference Hall, 2nd Floor, Galileo Block)	Track 1.2 Data Engineering for Advanced Analytics (Physical Einstein Hall, Galileo Block)	Track 1.3 Integrated Cyber-Physical and IoT Systems (Online)	Track 1.4 Cyber Security and Resilience (Online)
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Inaugural Ceremony

11:30 AM – 1:15 PM | Venue: Einstein Hall, Galileo Block

Link: <https://meet.google.com/jps-rnkx-hni>



Panel Discussion: Impact of GenAI on Education, Research, and Industry - A 360° Perspective

Esteemed Panellists - 1) Dr. Madhu Chitkara (Pro-Chancellor, Chitkara University), 2) Mr. Raghav Gupta (Managing Director – India and Asia Pacific, Coursera), 3) Prof. (Dr.) M. N. Hoda (Director, BVICAM, New Delhi), 4) Mr. Rasesh Shah (Chief Practice Officer, Fractal Analytics), 5) Mr. Amit Vats (Senior Principal (BFSI), Infosys Consulting)

Keynote Talk: Testing of Large-scale IoT Applications

Prof. (Dr.) Meenakshi D'Souza - Professor and Head, CSE, IIIT Bangalore, Karnataka

Lunch | 1:15 PM – 2:00 PM

Invited Talks | 2:00 PM – 2:45 PM

Title: **Curriculum Databases and Credit Banks**
Dr. Abhijat Vichare (Operations Manager, ACM India)
Venue: Conference Hall, 2nd Floor, Galileo Block

Title: **Securing the Digital Transformation in Healthcare: Unveiling Research Opportunities in Cybersecurity**
Dr. Sunil Kumar Gupta (Professor, CSE, UPES Uttarakhand)
Venue - Einstein Hall, Galileo Block

Paper Presentations | 3:00 PM – 4:00 PM

Track 1.5 Advances in Computer and Information Technology (Online)	Track 1.6 Data Engineering for Advanced Analytics (Physical Conference Hall, 2nd Floor, Galileo Block)	Track 1.7 Cyber Security and Resilience (Physical Einstein Hall, Galileo Block)
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Conference Dinner | 7:00 PM Onwards

Day 2: September 25, 2024 | Hybrid Mode

Invited Talks

9:45 AM - 11:10 AM | Einstein Hall, Galileo Block

Link: <https://meet.google.com/nef-dfqc-hwb>

Talk 1: Multi-Task Test Redundancy Reduction Optimization Problem based on the Sine Cosine Algorithm

Prof. (Dr.) Kamal Z. Zamli - Senior Professor, Faculty of Computing, Universiti Malaysia Pahang AlSultan Abdullah, Pekan, Pahang, Malaysia

Talk 2: SELP: A Framework for Implementing the Perception-Action Loop in an AI Agent

Dr. Bonny Banerjee - Associate Professor, Department of Electrical & Computer Engineering, The University of Memphis, USA



Paper Presentations | 11:30 AM - 1:00 PM

Track 2.1 Advances in Computer and Information Technology (Online)	Track 2.2 Advances in Computer and Information Technology (Online)	Track 2.3 Data Engineering for Advanced Analytics (Online)	Track 2.4 Data Engineering for Advanced Analytics (Online)
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Lunch Break | 1:00 PM – 1:35 PM

Paper Presentations | 1:45 PM - 2:45 PM

Track 2.5 Advances in Computer and Information Technology (Online)	Track 2.6 Advances in Computer and Information Technology (Online)	Track 2.7 Data Engineering for Advanced Analytics (Online)	Track 2.8 Data Engineering for Advanced Analytics (Online)
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Valedictory

3:00 PM – 3:30 PM | Einstein Hall, Galileo Block


Track 1.1 Advances in Computer and Information Technology

Time	10:00 AM – 11:20 AM Mode - Physical	
Venue	Conference Hall, 2nd Floor, Galileo Block	
Session Chairs	Dr. Abhijat Vichare (ACM India), Dr. Rattan Deep Aneja, Dr. Gurpreet Singh (Chitkara University)	
Session Co-Chair	Dr. Reema Gupta (8168014749)	
PID	Title	Presenting Author
SNCS-D-24-03276	Design an Artificial Intelligence based Machine Learning Framework for Improving Health Care Management	Susheela Hooda
SNCS-D-24-03128	SLDERCLC: Improving Smart Learning Frameworks through Deep Learning Enhanced Recommender Systems using an efficient Cross-Layer Collaborative Approach	Mukesh Kumar
SNCS-D-24-03049	Machine Learning-Assisted Vehicle Collision Detection Model (MLVCDM) for Road Intersections	P. Hiran Mani Bala
SNCS-D-24-03000	Efficient Facial Expression Recognition through Lightweight CNN Technique on Public Datasets	Richa Grover
SNCS-D-24-02349	Evaluating the Effectiveness of Machine Learning Classifiers in Tuberculosis Diagnosis	Shivani Bhardwaj
SNCS-D-24-03940	Revolutionizing Heart Attack Prevention: Machine Learning Models in Smart Healthcare	Mohit Bansal


Track 1.2 Data Engineering for Advanced Analytics

Time	10:00 AM – 11:20 AM Mode - Physical	
Venue	Einstein Hall, Galileo Block	
Session Chairs	Dr. Meenaksi D'Souza (IIIT Bangalore), Dr. S.N. Panda, Dr. Meenu Khurana (Chitkara University)	
Session Co-Chair	Dr. Jatin Arora (9466387981)	
PID	Title	Presenting Author
SNCS-D-24-03905	Peer collaboration in DBLP using Graph Convolutional Network	Chintoo Kumar
SNCS-D-24-02269	Hybrid Sampling Technique for Imbalanced Android Malware Family Classification	Kshamta Chauhan
SNCS-D-24-05622	Collaborative, Privacy Preserving Federated Learning Framework for the Detection of Diabetic Eye Diseases	Seema Gulati
SNCS-D-24-04515	Deep Learning for Predicting the Next Word in Bilingual Social Media Texts	Gurpreet Singh
SNCS-D-24-04435	Intelligent Traffic Congestion Classification Framework	Deepak Sharma
SNCS-D-24-04795	Advanced PTSVM based Breast Cancer Classification with Weighted Feature Selection	Chetna Sharma
SNCS-D-24-04299	Optimizing Heart Disease Prediction Using A Hybrid Dynamic Swarm Evolution Approach	Vansh Parikh


Track 1.3. Integrated Cyber-Physical and IoT Systems

Time	10:00 AM – 11:20 AM Mode: Online		
Link	https://meet.google.com/mmu-kxny-usp		
Session Chairs	Dr. Amrita (Sharda University, G. Noida), Dr. Ramamani Tripathy (Chitkara University)		
Session Co-Chair	Dr. Pradeepta Sarangi (8178974391)		
PID	Title	Presenting Author	
SNCS-D-24-03585	An Integrated Security VANET Algorithm for Threat Mitigation and Performance Improvement using Machine Learning	Vivek Bhardwaj	
SNCS-D-24-05404	BESIEC: An Adaptive Optimized Model for Task Scheduling and Offloading	Jayashree Mohanty	
SNCS-D-24-04414	Scheduling with Time Aware Shaping in Integrated Ethernet and Wi-Fi Networks	Abhilash Gopalakrishnan	
SNCS-D-24-05414	Exploring Firmware-Based Anti-Forensics in IoT Devices: Techniques and Implications	Mariya Shafat Kirmani	
SNCS-D-24-05172	Analytical Analysis of Clustering Algorithms in Vehicular Ad hoc Network: Systematic Review Research	Ashish Kumari	
SNCS-D-24-02557	Latency Aware Adaptive Ant Colony Algorithm for Service Placement for Healthcare Fog	Ankur Goswami	

Track 1.4. Cyber Security and Resilience

Time	10:00 AM – 11:20 AM Mode: Online		
Link	https://meet.google.com/cuq-eunz-ifg		
Session Chairs	Dr. Neetu Mittal (Amity University, Noida), Dr. Kapil Sharma (Chitkara University)		
Session Co-Chair	Dr. Pradeepta Sarangi (8178974391)		
PID	Title	Presenting Author	
SNCS-D-24-04401	An initial Risk Assessment for Multimodal with LSTM-Based Trust Evaluation Framework for Autonomous Vehicle Security	Balasubramani S	
SNCS-D-24-05570	GPU Side-Channel Attack Classification for Targeted Secure Shader Mitigation	Bibhuti Bhusan Dash	
SNCS-D-24-05038	Convergence of Deep Learning and Forensic Methodologies using Self-attention Integrated EfficientNet model for Deep Fake Detection	Koti Leela Sai Praneeth Reddy	
SNCS-D-24-04351	HGCNN-LSTM: A Data-driven Approach for Cyberattack Detection in Cyber-Physical Systems	Priyanga S	
SNCS-D-24-04186	Detection and Prevention of Attacks at Cross-Layer Using Traffic Analysis	Santhosh Kumar B.J	

Track 1.5. Advances in Computer and Information Technology

Time	3:00 PM – 4:00 PM Mode - Online	
Link	https://meet.google.com/siq-snvd-cgc	
Session Chairs	Dr. Sumit Kumar (NIT Jalandhar), Dr. Raj Gaurang, Dr. Vikas Khullar (Chitkara University)	
Session Co-Chair	Dr. Sangeetha Annam (9646444006)	
PID	Title	
SNCS-D-24-04331	A Deep Knowledge Distillation HeartCare Framework for Detection of Multi-Label Myocardial Infarction from Multi-Lead ECG Signals	Bidyut Bikash Borah
SNCS-D-24-05526	Hybrid Deep Learning Model for Classification and Prediction of Abnormalities in upper and lower extremities of Musculoskeletal Radiographs	Gurpreet Singh
SNCS-D-24-04506	Enabling The Translation of Electromyographic Signals Into Speech: A Neural Network Based Decoding Approach	Abhishek Bharali
SNCS-D-24-04461	Hybrid Routing Techniques for Location Privacy in IoT-Enabled Wireless Sensor Healthcare Networks	ARPITHA T
SNCS-D-24-04388	IndiRTS : Real time Segmentation for autonomous vehicles for Indian conditions	Pritam Chakraborty
SNCS-D-24-03148	Leveraging LSTM and Multinomial Naive Bayes for Nuanced Textual Based Sentiment Analysis	Umang Kumar Agrawal

Track 1.6 Data Engineering for Advanced Analytics


Time	3:00 PM – 4:00 PM Mode - Physical	
Venue	Conference Hall, 2nd Floor, Galileo Block	
Session Chairs	Prof. MN Hoda (BVICAM, New Delhi), Dr. Rupali Gill, Dr. Kamali Singla (Chitkara University)	
Session Co-Chair	Dr. Righa Tandon	
PID	Title	Presenting Author
SNCS-D-24-05496	A Study on South American Economic and Environmental Interactions through LSTM-Driven Analysis	Shalini Puri
SNCS-D-24-04095	Real-Time Drowsiness Recognition Framework Using Machine Learning	Shalini Puri
SNCS-D-24-04145	A Privacy-Protected Federated Learning with Cross-Silo Brain Tumour Dataset for Glioma Detection	Shagun Sharma
SNCS-D-24-03815	Photoplethysmography Bio-signal Extraction for Classifying Diabetes Mellitus Diseases using Pretrained Deep Learning Networks	Susama Bagchi
SNCS-D-24-03829	Multiclass classification of mental health disorders using XGBoost-HOA algorithm	Ravita Chahar
SNCS-D-24-03451	Data Analytics Approach for Enhanced Sales Forecasting (DAAESF): Feature Selection and Classifier Integration Analysis	Gagandeep Kaur

Track 1.7 Cyber Security and Resilience

Time	3:00 PM – 4:00 PM Mode - Physical	
Venue	Einstein Hall, Galileo Block	
Session Chairs	Dr. Sunil Gupta (UPES Uttarakhand), Dr. P.K. Khosla, Dr. Sushil Kumar Narang (Chitkara University)	
Session Co-Chair	Dr. Kamaldeep Garg (9988493359)	
PID	Title	Presenting Author
SNCS-D-24-04497	Local Binary Pattern based Robust Coverless Information Hiding Approach	Sangeeta Gautam
SNCS-D-24-04181	Simulation Analysis and Investigation of Magnetic field effects on growth of Wheat samples (DBW-187, PBW-725)	Preetinder Singh
SNCS-D-24-04472	Impact of Class Balancing on Intrusion Detection System for WSN-BFSF dataset	Vaishali Soni
SNCS-D-24-05531	Detecting Smishing Messages using BERT and Advanced NLP Techniques	Kamaljeet Kaur
SNCS-D-24-04032	Enhanced Intrusion Detection with Advanced Feature Selection and Ensemble Classifier Techniques	Susama Bagchi
SNCS-D-24-03999	2-Phase Multi-trait Biometric Authentication Model against Spoofing Attack using Deep Hash Model	Prabhjot Kaur
SNCS-D-24-03410	Analysis of Data Injection Attacks in Industrial Control Systems: Bridging Research Gaps and Defense Strategies	Ankita Sharma

Day - 2: 25th September, 2024

Track 2.1. Advances in Computer and Information Technology

Time	11:30 AM – 1:00 PM Mode - Online	
Link	https://meet.google.com/ant-xnmo-znz	
Session Chairs	Dr. Sandeep Kumar Harit (PEC Chandigarh), Dr. Chander Prabha, Dr. Gaganpreet Kaur (Chitkara University)	
Session Co-Chair	Ms. Gagandeep Kaur (9915665579)	
PID	Title	
SNCS-D-24-05459	On Hypergraph Neural Networks and its Stability towards Higher-Order Knowledge Representation and Learning	Thipendra P Singh
SNCS-D-24-03814	DSENetk: An Efficient Deep Stacking Ensemble approach for COVID-19 induced Pneumonia prediction using Radiograph Images	Amit Kumar Gupta
SNCS-D-24-04329	Revolutionizing Rose Grading: Real-time Detection and Accurate Assessment with YOLOv8 and Deep Learning Models	Baivab Das
SNCS-D-24-03773	An AIoT enabled Multi-level Decision Support System for Remote Arrhythmia Analysis using Efficient Wavelet Transform	Pramod Kumar Soni
SNCS-D-24-03834	TeluguScriptify: A Custom Deep Learning Model for Handwritten Telugu Text Recognition and Tool Development	Ramakurthi Chandra Siddartha
SNCS-D-24-04421	An Ensemble Technique for Cardiac Data Compression in Smart Healthcare System	Sudeshna Baliarsingh
SNCS-D-24-03080	Feature Selection using Particle Swarm Optimization and Ensemble-based Machine Learning Models for Ransomware Detection	Deepak Kumar Verma

Track 2.2. Advances in Computer and Information Technology

Time	11:30 AM – 1:00 PM Mode - Online
Link	https://meet.google.com/ige-debn-mwe
Session Chairs	Prof. (Dr.) Rajeev Tiwari (IILM University, G Noida), Dr. Deepak Thakur, Dr. K.R. Ramkumar (Chitkara University)
Session Co-Chair	Dr. Mrinal Paliwal (9045384709)



PID	Title	Presenting Author
SNCS-D-24-05159	Road Information Extraction from High-Resolution Aerial imagery through Deep Multi-Scale Attention-Guided (DMSA)-Net	Priyanka Rawat
SNCS-D-24-05834	Fine-Tuning Llama 3 for Sentiment Analysis: Leveraging AWS Cloud for Enhanced Performance	Shantanu Kumar
SNCS-D-24-02722	Comparative Analysis of Machine Learning Models for Crop Yield Prediction Across Multiple Crop Types	Harikrishnan R
SNCS-D-24-05790	Integration of Discriminative Information from Expressive and Neutral Face Image for Effective Modelling of Facial Expression Classification Problem	Amith K Jain
SNCS-D-24-03267	Innovative Medical Imaging Concept for Brain Tumor Detection using Neural Network	Kishore Kanna R
SNCS-D-24-05644	Enhancing Blood Platelet Counting through Deep Learning Models for Advanced Diagnostics	Utkarsh Dev
SNCS-D-24-05304	Investigating the Psychological Outcomes through Yoga for Stress Reduction using Machine Learning and Statistical Techniques	Apurva Gupta

Track 2.3. Data Engineering for Advanced Analytics

Time	11:30 AM – 1:00 PM Mode - Online
Link	https://meet.google.com/cqi-mysc-fer
Session Chairs	Prof. (Dr.) Vineeta Khemchandani (Galgotia University, G. Noida), Dr. Deepali Gupta, Dr. Sudesh Mittal (Chitkara University)
Session Co-Chair	Dr. Saravjeet Singh (9050366551)



PID	Title	Presenting Author
SNCS-D-24-03735	The Future of Work: Robotic Process Automation and Its Role in Shaping Tomorrow's Business Landscape	Vivek Bhardwaj
SNCS-D-24-04473	Enhancing Prediction Accuracy with an Innovative Hybrid Fuzzy Time Series Framework	Abhijit Gogoi
SNCS-D-24-05565	Towards effective software defect prediction using machine learning techniques	Akshay Jadhav
SNCS-D-24-03818	Detecting Deceptive Identities: A Machine Learning Approach to Unveiling Fake Profiles on Social Media	Kaviya P
SNCS-D-24-04531	DnnARs: An Artificial Intelligence Technique for Prediction of Antimicrobial Resistant Strains in E. coli Bacteria causing Urine Tract Infection	Debasish Swapnesh Kumar Nayak
SNCS-D-24-05372	Tracing Information Flow in Clustered Complex Networks: Unraveling Centrality Patterns with m-PageRank	Jo Cherian
SNCS-D-24-03554	Smart Glasses for Image Text to Multilingual Speech Conversion using Raspberry Pi	Sonu Kumar

Track 2.4. Data Engineering for Advanced Analytics

Time	11:30 AM – 1:00 PM Mode: Online
Link	https://meet.google.com/tvx-vuhy-jru
Session Chairs	Dr. Subhanshu Goyal (Marwadi University, Rajkot), Dr. Osho Sharma (Chitkara University)
Session Co-Chair	Dr. Pradeepta Sarangi (8178974391)



PID	Title	Presenting Author
SNCS-D-24-04762	Disease Detection Using Ensemble Model In Machine Learning	Irfan Sayyad
SNCS-D-24-04509	Healthcare Data Sensitivity Assessment through Biomedical NLP-driven Classification and Statistical Feature Analysis	Manoj Dhawan
SNCS-D-24-04348	A Quasi-Operational-Chaotic Atom Search Optimization Algorithm to Detect Epileptic Seizure from EEG Signal Using WPT and ELANFIS Classifier	Kaliprasanna Swain
SNCS-D-24-04852	Cardiovascular Disease Analysis Using Machine Learning Ensemble Methods	Hemanta Kumar Bhuyan
SNCS-D-24-04489	Detection of Pneumonia disease based Lung Infection using deep learning model	Hemanta Kumar Bhuyan
SNCS-D-24-04415	Personalized Behavioral Abnormality Detection in Smart Homes	Prabharoop C C


Track 2.5. Advances in Computer and Information Technology

Time	1:45 PM – 2:45 PM Mode - Online
Link	https://meet.google.com/zse-epbg-uky
Session Chairs	Dr. Shamik Tiwari (IILM University, G Noida), Dr. Vinay Kukreja, Dr. Amanpreet Kaur (Chitkara University)
Session Co-Chair	Dr. Dinesh Vij (9888575885)




PID	Title	Presenting Author
SNCS-D-24-03812	Performance Evaluation of Modified YOLOv5 Object Detectors for Crop-Weed Classification and Detection in Agriculture Images	Sandip Sonawane
SNCS-D-24-04426	An Efficient Implementing Deep Learning Model to Analyze Muscle Activity Patterns in Biomechanical Simulations	Durgesh Rao
SNCS-D-24-04439	A MATTER-Enabled IoT Framework for Enhanced Fire Detection and Real-Time Decision-Making	Navodit Bhardwaj
SNCS-D-24-04478	A Reinforcement Learning Approach for Routing in Marine Communication Network of Fishing Vessels	Simi Surendran
SNCS-D-24-05827	Optimized service function chaining placement in edge cloud systems using LSTM	Sadaf Mujawar aka sadaf anjum savanur
SNCS-D-24-04100	Optimized Deep Learning Framework for Cryptocurrency Price Prediction	Abiya Pardeshi


Track 2.6. Advances in Computer and Information Technology

Time	1:45 PM – 2:45 PM Mode - Online	
Link	https://meet.google.com/eyd-xzfq-ifh	
Session Chairs	Dr. Satyasai Jagannath Nanda (MNIT, Jaipur), Dr. Amandeep Kaur, Dr. Durgesh Srivastava (Chitkara University)	
Session Co-Chair	Dr. Tanya Gera (9501635889)	
PID	Title	Presenting Author
SNCS-D-24-03113	State-level based Interactive Learning Model for Feature Selection	Md Sirajul Huque
SNCS-D-24-04353	SH-OSP: A Hybrid Algorithm using Spotted Hyena Optimizer Enabled with Optimal Stochastic Process for Epileptic Seizure Detection	Puspanjali Mallik
SNCS-D-24-05815	ElementaryCQT: A New Dataset and Its Deep Learning Analysis for 2D Geometric Shape Recognition	Archana Boob
SNCS-D-24-05891	Enhancing Secure Data Transmission through Deep Learning-based Image Steganography and Super-Resolution Generative Adversarial Networks	B N Sukanth
SNCS-D-24-03540	Deep Learning-Based Brain Tumor Image Analysis for Segmentation	Zahid Mansur
SNCS-D-24-04014	Feature Selection for Cardiovascular Diseases using Machine Learning Ensemble Methods	Md Sirajul Huque

Track 2.7. Data Engineering for Advanced Analytics

Time	1:45 PM – 2:45 PM Mode - Online	
Link	https://meet.google.com/syc-gxjm-ush	
Session Chairs	Prof. (Dr.) Tanupriya Choudhury (GEU Dehradun), Dr. Vikas Solanki, Dr. Naresh Kumar Trivedi (Chitkara University)	
Session Co-Chair	Dr. Neha Sharma (8447044054)	
PID	Title	Presenting Author
SNCS-D-24-03721	Inductance Modelling of Planar Meander Structure using RBM and kNN	Mohammad Ahmad Ansari
SNCS-D-24-05760	Autoencoder Based Multistage Strategy for Class Imbalance in Medical Imaging Analysis - Chest X rays	Shiva Prasad Koyyada
SNCS-D-24-03688	Prediction of Parkinson's Disease using Hybrid Machine Learning Model	Dharani Vipparla
SNCS-D-24-05549	Improving Detection of Autism Spectrum Disorder (ASD) by Using Mutual Information-based Feature Selection Technique	Disha D N
SNCS-D-24-05130	Real-Time Smart Facial Emotion Detection using EmoAnalyzer Model with Minimum Computational Cost	Sanat Kumar Patro

Track 2.8. Data Engineering for Advanced Analytics

Time	1:45 PM – 2:45 PM Mode - Online	
Link	https://meet.google.com/mmu-kxny-usp	
Session Chairs	Dr. Ashwin R. Dobariya (Marwadi University, Rajkot), Dr. Ramamani Tripathy (Chitkara University)	
Session Co-Chair	Dr. Pradeepta Sarangi (8178974391)	
PID	Title	Presenting Author
SNCS-D-24-04336	Leveraging CNN and Fundus Imaging for Enhanced Glaucoma Detection	Shajila Beegam M K
SNCS-D-24-04369	Centrality-Based Approach for Identifying Essential Cancer Proteins in PPI Networks	Trilochan Rout
SNCS-D-24-04402	Automated Arrhythmia Detection using War Strategy Optimization Enabled with Archimec Optimization Algorithm and Rule Based Classifiers	Prakash Chandra Sahoo
SNCS-D-24-02381	High-level ensemble: An approach for breast cancer classification	Abdulahi Mahammed Adem
SNCS-D-24-04340	Fake News Detection using ARO and LSTM Algorithm	Amit Bhagat
SNCS-D-24-05410	Features responsible for spread of Zoonotic Disease Brucella: A study on Central India Population	Richa K. Makhijani



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