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1.	**Authors:**	**Ravikumar Kondle, S. Dastagiri, M. V. Lakshmaiah**
	Paper Title:	**Implementation of IoT in Embedded Systems for Real Time Water Quality Monitoring**

Abstract: Here we describe an embedded system, its development and design with the help of Raspberry Pi 3 controller that monitors the quality parameters of water which are pH level, turbidity, conductivity, total dissolved solids (TDS) and temperature at the same time. Internet of Things (IoT) technique is employed for the development of the system. Using this system, we have collected the data for the quality of water parameters include: pH level, turbidity, electrical conductivity, total dissolved solids (TDS) and temperature. After processing the data, a short message and email is sent using GSM/GPRS module when the parameters exceed the accepted limit. The efficiency of the system has been checked by comparing the parameter values that are collected using this system with manually measured parameter values in a certified laboratory

Keyword: Accuracy, IoT, Raspberry pi, Sensor Network, Water Quality.

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2.	**Authors:**	**Y. L Malathi Latha, J. Manoranjini**
	Paper Title:	**Automatic Pest Detector in Agricultural Farms using Acoustic and Image Wireless Sensor Network Technology**

Abstract: India is an agricultural country which depends on agriculture and crops for its economic survival. The production of crops is majorly affected by biotic living organisms, mainly the parasites and pathogens. To handle this continuous monitoring of the crop production is addressed seriously in developed countries. Sensor technology is a promising technology which shows great significance in addressing the agriculture and monitoring based on different parameters. In recent years the advanced wireless sensor networking technology has become popular in pest monitoring and early warning to farmers for timely management of potential pests in agriculture. Image sensors captures pests along with the system which would employ an acoustic device sensor for monitoring the pest's noise level which would notify to the farmer of the specific area where the infestation is occurring.

Keyword: Crop Areas, Sensor nodes, Bayesian classifier, Dimensionality Reduction, Feature Extraction,

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Feature Selection.

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3. **Authors:** **M. Srilatha, R. Hemalatha**

Paper Title: **Student Attendance Management System using Principal Component Analysis Method**

Abstract: Attendance taking and maintaining is a tedious job in the academic institutions where the time of class is restricted. The manual attendance i.e., roll call or paper-based signature systems usually consumes more time and error prone and also possibility of recording proxy attendance is more. Attendance is one of the criteria in considering students’ eligibility for attending the external examinations and also for the promotion to the next semester / year, where these kinds of problems may cause severe effect on the academic institutions. As the strength of students in a class is increasing day by day; monitoring, awarding and maintenance of attendance has becoming a challenge for the academic institutions. As a solution, attendance can be recorded using anyone of the existing biometric techniques like fingerprinting, iris recognition, signature, face recognition etc. Face identification is the best method among all the earlier mentioned methods for implementing in the academic institutions as it does not require human intervention and it is a cost-effective technique. A novel student attendance recording and management system using a MATLAB application, LabVIEW, Camera interface and GSM is proposed in this paper. Students’ faces will be captured with the help of a camera connected to a computer and Eigen values of the captured images will be detected with the help of MATLAB executed by LabVIEW Mathscript node. LabVIEW, a graphical programming environment is adopted for acquiring face, processing and authenticating the student once the match is found. Authenticated student attendance will be updated, and a message will be sent with the help of GSM module interface to myRIO. Proposed system replaces the manual attendance system which improves the performance of existing system.

Keyword: Image Processing, Face Recognition, myRIO, LabVIEW, MATLAB.

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4.

Authors: **G. Dhana Lakshmi, M. Kanthi Rekha**

Paper Title: **Keyword Extraction from Tweets using Graph-Based Methods**

Abstract: Social media refers to a set of different web sites like Twitter is a microblogging service that generates a huge amount of textual content daily. These methods based on text mining, natural language processing, and information retrieval are usually applied. The text mining approaches, documents are represented using the well-known vector space model, which results in sparse matrices to be dealt with computationally. A technique to extract keywords from collections of Twitter messages based on the representation of texts employing a graph structure, from which it is assigned relevance values to the vertices, based on graph centrality measures. The proposed approach, called TKG, relies on three phases: text pre-processing; graph building and keyword extraction. The first experiment applies TKG to a text from the Time magazine and compares its performance with TFID [1] and KEA[6], having human classifications as benchmarks. Finally, these algorithms are designed to the sets of tweets of increasing size were used and the computational time necessary to run the algorithms was recorded and compared. The results obtained in these experiments showed that building the graph using an all neighbors edging scheme invariably provided superior performance, and assigning weights to the edges based on the weight as the inverse co-occurrence frequency was superior cases. One possible future work is to apply centrality measures TKG showed to be faster for all its variations when compared with TFIDF and KEA, except for the weighting scheme based on the inverse co-

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occurrence frequency. TKG is a novel and robust proposal to extract keywords from texts, particularly from short messages, such as tweets

Keyword: Twitter, Text mining, Graph-based text representation, Centrality, Keyword extraction

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5.

Authors: **Swathi Sowmya Bavirthi, Supreethi. K. P**

Paper Title: **Design and Analysis of Spatial Skyline Queries Indexing**

Abstract: Dwelling in the information age permits nearly everybody needs to recover countless information and choices to gather from to fulfill their necessities. In distinctive cases, the quantity of information accessible and the speed of change may cover the ideal and required explanation. Spatial-textual queries provide the most acclaimed nearest points concerning a conveyed site and a keyword set. Current practice regularly thought on the most capable technique to expertly get the top-k resultset reestablished a spatial-scholarly query. A capable Spatial Range Skyline Query (SRSQ) algorithm is proposed which initially performsa spatial keyword query (SKQ) that relies upon an IRtree that documents the information. Skyline centers picked are not simply established on their partitions to a lot of inquiries and more subject to their significance to a social occasion of query keywords. Additionally, besides proposed range skyline (RS) methods based on R-tree multi-dimensional space including secondary- memory pruning tools for operating field skyline queries is accomplished. The advanced scheme is dynamic and I/O optimum. Ultimately, methodology presents a modern assessment that demonstrates the proficiency.

Keyword: R-Tree, road networks, Nearest Neighbour, Indexing, Textual relevance, maximal k spatial patternqueries.

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6.	**Authors:**	**SUSPEND**	
	Paper Title:	**SUSPEND**	
	Abstract: **Keyword:** **References:**		**1-4**
7.	**Authors:**	**Kogila Raghu, M Sadanandam, V Kamakshi Prasad**	
	Paper Title:	**An Examination of Emotion Recognition using Machine Learning Algorithms on Different Speech Databases**	
	Abstract: The speech recognition system plays a vital role in understanding the emotions of natural language. The identification of emotions from speech is a challenging task. The performance of the speech recognition system is effects on the speech signals. The speech contains different emotions feelings. Many researchers introduced different emotion recognition techniques. However, these techniques achieved better performance but unsatisfied in identify emotion of natural languages. This paper proposed a novel speech recognition system, which identify the emotions based on the speech signals.The Mel Frequency Cepstral Coefficients (MFCC) features. On the resultant features of speech applied crossvalidation using the test emotions. The performance of the proposed system verify with the SVM and other two classifiers. The proposed emotion recognition system achieves better performance. The empirical results shows that the proposed system outperforms when compare with different classifiers and databases.		**37-39**

Keyword: Corpora, Features LPCC, MFCCLR, SVM, HMM, GMM.

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Authors: **A. Sai Hanuman, Kanegonda Ravi Chythanya**

Paper Title: **Findings on Real-Time Location Tracking by Implanting Different Mechanisms**

Abstract: Monitoring individuals or important things has never been simpler, thanks to advances in communication technology. A tracking device is an electronic unit intended to communicate its area, either in light of a sign or at set interims.Tracking devices can permit you to screen stock, find imperiled creatures, or help salvage laborers discover you in a crisis.So Real-time location tracking consistently takes on a vital job in the life of the person. Growth in advanced technology advancements such as 2 G, 3 G, 4 G, LoRa, and ZigBee has gained progressive changes in realtime location tracking. Technology only works when it reaches the user's every standard. This study explored the appropriate technology to track the real-time position amidst the technologies listed above.This paper proposed a model for real-time location tracking through a device that offers the ability to track the location in case of emergency. The tracking system involves the GSM-based GPRS activated unit that continuously transmits the moving object's GPS location to a mobile device that has activated the specified software and sends the SMS in an emergency to the registered mobile number

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Keyword: LoRa, Zigbee.

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32. Benny Vejlgaard1, Mads Lauridsen1, Huan Nguyen1, Istv´an Z. Kov´acs2, Preben Mogensen12, Mads Sørensen" Coverage and Capacity Analysis of Sigfox, LoRa, GPRS, and NB-IoT",IEEE,2017.

9.	**Authors:**	**T. Ramathulasi, M. Rajasekhara Babu**
	Paper Title:	**Parallel Computing of PVS Node based GTS Algorithm on GPU**

Abstract: The developments in the field of computer architecture, it allows humans to play games like Chess, Tic-tac-toe, Go, etc. with computer machines using AI technology. In AI, Game tree search (GTS) is an important approach and is directed toward finding the finest choice of move for computer games. Using the traditional GTS algorithm the computer could not win a human. So there is a need for enhancing algorithms using dynamic parallelism of GPU. The block of thread set is organized on GPU is either one or two or three dimensional for parallel computations. On this, each thread designated by an inimitable mixture of indices. In this paper, parallel computing of node-based Principal Variation Search (PVS) GTS algorithm presented, which runs on GPU using libraries of CUDA. This experiment tested on chess games with different depths and results are compared with the threads on CPU and GPU. The results proved that GPU improves the performance of speedup up to 80 percent on the checkers game. Parallel computing greatly increasing the efficient use of CPU and improves the performances of the PVS-GTS algorithm on GPU to search deeper layers and find the optimal moves for the current players for two-player computer games.

Keyword: PVS algorithm, parallel computing, Artificial Intelligence, CUDA.

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10.

Authors: **Pampati Nagaraju, Etyala Ajith Kumar**

Paper Title: **Affordable Cluster-Based Context for Multimedia Big Data Extraction**

Abstract: Most of the data being created than ever before and that can be textual, multimedia, spatial information. To process this data, several data processing platforms have been developed including Hadoop, based on the Map Reduce model and HPCC systems. The HPCC System analysis provides a framework for multimedia data processing. Moreover, Multimedia data encompasses a wide variety of data which is not limited to image data, video data, audio data and even textual data, while developing a unified framework for such wide variety of data to consider computational difficulty in it. Preliminary results show that HPCC can potentially reduce the computational complexity significantly.

Keyword: Hadoop Big Data Analysis, HPCC framework, HDFS, Feature Extraction, Multimedia Big Data

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11.

Authors: **V. Chandra Shekar Rao, Chinthapally. Akanksha , Voore Subba Rao**

Paper Title: **Applications of Nano-Rkin Internet of Things (Iot)**

Abstract: Internet of Things (IoT) is notoriously described as World wide web of objectives as 'Things' is a global and interconnected communicate for whatever easily interchange information through Internet sensing systems. The tiny wsn devices are actually having qualities like low energy capability, less weight minimal battery support managed through Real-time operating systems. [6]. Nano-RK is open source and having to work on real-time tasks. The Nano-RK according reserve reservations tasks known other name as resource kernel. A source little bit uses reservations on specifically just how typically device information could be consumed as well as handled. For example, using resource reservations concept, create Central Processing Unit resource appointments present day innovation, a task might just be actually enabled to carry out 10 ms every 150 ms. Likewise one more case through making use of Nano-RK by using System source reservations innovation a node could merely be enabled to transfer 10 network packages every moment. The utilizing these bookings to secure electric battery lifestyle of a node along with likewise protecting a fallen short node from making too much messages in system internet network scenario. According this, the energy capability of a battery life of a node are going to definitely be actually reduced. The Nano-RK is open resource as well as additionally support in programming language like C and C++. Nano-RK can operates on the Atmel-based FireFly platform. The target of this paper is an intro importance of features and applications an intro of Nano-RK. Depending on to running device capacities as well as additionally qualities as well as an open resource of ecological community facilities, the Nano-RK is the a suited operating system os for tightened as well as minimized electrical power sensing unit resources for World wide web of connected things. By particular study, the research study of one of the most

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crucial functions of IOT enable Nano-Rk located Reservations Booking, Deep-in sleep mode environment, Error administration and likewise pointing characteristics of Nano-RK os. [3].

Keyword: Internet of Things (IoT, Nano-RK, Real Time Operating System (ROT), reservation, deep in sleep mode.

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12.	**Authors:**	**P Vasanth Sena, P Sammulal, Suresh Pabboju, D L Srinivasa Reddy**
	Paper Title:	**A Mining Frame Work of CO-PO Attainment using Deep Learning Techniques**

Abstract: student performance measured in CO-PO (Course Outcome and Program Outcome) attainment for OMR based answer sheet automation playing very curtail role in pupil concert analysis in this approach. In the proposed work, marks evaluation sheet is consider as input image, then apply frame cropping technique to extract the marks filled table by subdividing into cells as individual images by frame cropping technique. In order to recognition of hand written digit in each frame, various machine learning models are adopted, trained. Experimental results from proposed work show that convolutional neural network excels higher in identification digits from frames. The outputs are then converted to CSV version, which is used to evaluate CO-PO attainment for each learner. The experiments have been conducted and tested in proposed work on various machine learning

techniques and compared the results to pick the optimal model.

Keyword: Hand written digit, Object detection, Classification, Deep learning.

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13. **Authors:** **Bhogendra Rao PVRR**

Paper Title: **Efficient Software Architecture Pattern for Accelerator Based Computing**

Abstract: Graphics Accelerators are increasingly used for general purpose high performance computing applications as they provide a low cost solution to high performance computing requirements. Intel also came out with a performance accelerator that offers a similar solution. However, the existing application software needs to be restructured to suit to the accelerator paradigm with a suitable software architecture pattern. In the present work, master-slave architecture is employed to convert CFD grid free Euler solvers in CUDA for GPGPU computing. The performance obtained using master-slave architecture for GPGPU computing is compared with that of sequential computing results.

Keyword: Software Architectures, Architecture Patterns, Parallel and Distributed Computing, GPGPU, CUDA computing.

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Authors: **Mallareddy A, Sridevi R, Prasad Ch G V N**

Paper Title: **Secure Data Aggregation Scheme for IOT Applications in Cloud**

Abstract: : While Internet of Things (IoT) technology comprises of nodes that are self-configuring and intelligent which are interconnected in a dynamic network, utilization of shared resources has been revolutionized by the cloud computing effectively reducing the cost overheadamong the cloud users.The major concerns of IoT infrastructure are reliability, performance, security and privacy. Cloud computing is popular for its unlimited storage and processing power. Cloud computing is much more matured with the capability to resolve most of the issues in IoT technology. A suitable way to address most of the issues in IoT technology is by integrating IoTparadigm into the Cloud technology.In this regard, we propose a methodology of applying our EPAS scheme for IoT applications. In our previous work[2] , we have proposed an Enhanced Privacy preserving gene based data Aggregation Scheme (EPAS) for private data transmission and storage by utilizing Enhanced P-Gene erasable data hiding approach. Enhanced P-Gene scheme ensures secure transmission and storage of private data by relying on a data aggregation scheme fully dependent on erasable data hiding technique. In the current work we analyse the applicability of the EPAS scheme for IoT applications. Experimental results show the suitability of the proposed scheme for application involving numeric data and also demonstrates performance improvement with existing proposals for data aggregation in cloud.

Keyword: Cloud Computing, IoT, Data Hiding, Data Security, Data Aggregation, Enhanced P-Gene.

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15.

Authors: **Shivpal Singh, Bhogendra Rao PVRR**

Paper Title: **Issues in Design and Development of Reliable Configurable Distributed Checkout and Launch System for Mission Critical Aero-Space Flight Vehicles**

Abstract: Role of Configurable Distributed Checkout and Launch System (CDCLS) is pivotal in carrying out quick health checks and launching of Aerospace Flight Vehicles. Configurable Distributed Architecture provides flexibility for connecting nodes and scaling Distributed System. Different configurations can be derived from the Master Configuration. Since, Ultra high reliability and infallible performance of the CDCLS is of paramount

importance, Safety criticality and Mission criticality analysis needs to be carried out for determination of mission critical parameters. These critical parameters need to be addressed by required fault tolerant architecture, which can be implemented in Hardware and Software for achieving system reliability objective (Say, 0.99).

Keyword: Distributed System, Launch System, Reliability, Fault Tolerance, Automated Testing, System validation

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16. **Authors:** **John Babu G, Sridevi Rangu**

Paper Title: **Deep Learning based Effective Steganalysis**

Abstract: There is an evident paradigm shift in steganalysis techniques with discovery of deep learning networks. As steganalysis is a classification task, it is done by machine learning classifiers and ensembles of them. But with the proliferation of deep learning and Convolutional Neural Networks in many areas, the performance of steganalysis techniques have jumped up to a another high, because of the application of Convolutional Neural Networks. The traditional steganalysis techniques consists two important steps, i.e., feature extraction and classification; where as deep learning networks learn the features automatically, eliminating the need of extraction of handcrafted features. Because of this feature CNNs were highly successful in image recognition and image classification techniques. In addition to that, feature extraction and classification are combined together in deep learning hence classification would be more effective because of the learning of the features which are really important for classification. But in Steganalysis the task is to detect very subtle and weak noise created by the hidden data with steganography techniques. We have designed a deep CNN architecture customized for steganalysis task based on existing residual neural networks frame. We have introduced a descriptor to capture the inter pixel dependencies and which acts as an indicator for weightage of a particular feature maps. Thus the classifier can give more weightage to effective feature maps instead of treating all the feature maps equally. We have also used a gating mechanism by using sigmoid function after nonlinear activation function sandwiched between two fully connected layers. This enhancement to the existing deep residual neural networks has given better results in terms of error detection rate compared to the other deep learning based steganalysis techniques.

Keyword: Classification, Convolutional Neural Networks, Deep Learning, Steganalysis.

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Authors: **Ayesha Mariyam, SK Althaf Hussain Basha, S Vishwanadha Raju**

Paper Title: **Applications of Multi-Label Classification**

Abstract: The absence of labels and the bad quality of data is a prevailing challenge in numerous data mining and machine learning problems. The performance of a model is limited by available data samples with few labels for training. These problems are ultra-critical in multi-label classification, which usually needs clean data. Multi-label classification is a challenging research problem that emerges in several applications such as multi-object recognition, text categorization, music categorization and image classification. This paper presents a literature review on multi-label classification, various evaluation metrics used for analyzing performance and research hchallenges.

Keyword: Multi-label classification, Deep Learning, Machine Learning, Feature Extraction.

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18. **Authors:** **K.S. Madhavan**

Paper Title: **General Regression Neural Network versus Back Propagation Neural Network for Prediction of Reheater and Super Heater Sprays in Thermal Power Plants**

Abstract: Neural Network models are used for Reheater and Super heater spray prediction in Thermal Power Plants. This paper makes a comparative study of the General Regression Neural Network (GRNN) model versus the Back propagation Neural Network (BPNN) model for the quality and accuracy of prediction of Reheater and Super heater Sprays in Thermal Power Plants. It proves that GRNN is better and gives more stable prediction within range; the glitches between the predicted and actual values being less in number as well as value.

Keyword: Back propagation Neural Network, General Regression Neural Network, Reheater Spray, Super heater Spray.

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	Authors:	**Yonas Melaku Waktola, Kokeb Abera**
	Paper Title:	**Optimizing Consumption of Energy in Multicast model in -Constrained Mobile Wireless Networks**

Abstract: This paper addresses the issue of saving energy consumption in a multicast model in mobile wireless networks with time limit, where source information must be sent to all destinations within an self imposed time limit. Many of the existing works focuses on getting transmission schemes with minimal energy transmission, bypassing the use of energy on the receiver side. Therefore, in this ConMap paper, a new and novel framework is proposed for an efficient design of the scheme employed in transmission that increases the efficiency of the transmission and reception energy together. Thus, the issue of designing a scheme of minimal energy transmission, DeMEM, will be given as one of combination in optimization and will show approximately ratio of polynomial time algorithm of DeMEM can not be better than (1/4) ln k. In order to give very efficient approximation schemes, the proposed model ConMap converts DeMEM into an equivalent oriented direct shaft issue by creating helpdesk of graphic devices to capture the use of energy, maps the calculated tree into a scheme of transmission I

There are three advantages of ConMap:

1) General: ConMap shows a Clear application to a wide range of power models.

2) Flexibility:Any Steiner tree problem algorithm can be incorporated into our ConMap system to obtain spe cific guarantees and performance complexity.

Efficiency: The ConMap model retains the approximation ratio of the built-in Steiner tree algorithm, which will only tolerate a minor overload. These three features are empirically validated and in contrast with an exact brute force algorithm, ConMap also provides near-optimal transmission schemes. In this paper, energy transmission and reception are jointly considered in the design of multicast transmission schemes.

Keyword: Multicast, Mobile wireless networks, ConMap.

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20.	**Authors:**	**K. Somasena Reddy**
	Paper Title:	**A Conceptual Framework for Intelligent Power Distribution Transformers**

Abstract: With the agenda of developing smart cities there is huge demand for continuous power supply. Power distribution transformers play avital role in providing a reliable power supply. Failure of a transformer will lead to interruptions in power supply. Many parameters lead to transformer failures. Health monitoring of transformer using IoT technology may help take proactive maintenance steps instead of reactive maintenance. When we combine IoT with AI it will more effective and IoT devices will take decision on their own. This paper presents a conceptual framework of this concept which makes the IoT devices in the transformers to make real-time decisions with the use of AI.

Keyword: Smart Cities, uninterrupted power supply, distribution transformer IoT, AI.

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21. **Authors:** **N. Gayathri, K. Mahesh**

Paper Title: **Analyzing Global Feature for Duplicate Video Retrieval using CNN and PCA**

Abstract: At present, Duplicate video retrieval has attained the interest of researchers because of the vast amount of online videos. This video retrieval has extensive applications like online video monitoring, copyright protection, and automatic video tagging. Some local features constitute primary building blocks in this video retrieval algorithms; with this, most researchers use local information for feature representation. Moreover, this local knowledge-based representation eliminates more prominent information regarding global distribution. However, the discriminative power of local descriptors is diminished by feature quantifiers. The ultimate goal is to use universal features to categorize similar keyframes into the same class that is essential to enhance video retrieval performance. Here, CNN features acquire global geometric distribution of video, from which discrete features are considered for computation. Discretization is performed with principal component analysis. These kinds of features maintain geometry transformation with reduced noise. Next, an integration strategy known as k-NN is used to merge these features with global VR features for enhancing recognition accuracy. Experimentation has been carried out with available datasets to show that the anticipated model outperforms

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existing approaches in VR applications.

Keyword: Video retrieval, video tagging, CNN, global geometric features, discretization, k-NN

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