



## K K Wagh Education Society's K K Wagh Institute of Engineering Education and Research, Nashik.

February 2024

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### ■ Visit of Padmashri Hon. Prataprao Pawar



Padmashri Hon. Shri. Prataprao Pawar delivering speech

Padmashri Hon. Shri. Prataprao Pawar (Chairman, Sakal Group) visited our Institute on Saturday, 10<sup>th</sup> February 2024. During his visit, he interacted with students and staff of our institute on innovation and entrepreneurship. Hon. Shri. Pawar is a well-known entrepreneur and industrialist. During the session, he guided the students and staff through inspiring speech on his career as entrepreneur and interacted with students on questions raised. He also visited the AICTE-idea Lab of our institute and saw the facilities and students' project. He appreciated students and staff for innovative projects completed. He was welcomed and felicitated by Hon. Chairman Sameer B. Wagh. On this occasion Secretary Prof. K. S. Bandi, Principal Dr. K. N. Nandurkar, Mr Ajinkya Wagh, Heads of department, staff and students were present.

### ■ Guidance by Prof. Anilkumar Gupta



Felicitations of Dr. Anilkumar Gupta

Dr. Anilkumar Gupta, Executive Director, D. Y. Patil Group Kolhapur and Talsande, visited on 24<sup>th</sup> February 2024. His guidance session was organized for all Deans, HODs and staff. Hon. Chairman Shri Sameer Wagh felicitated Chief Guest, Dr. Anilkumar Gupta on this occasion. Dr Gupta addressed on issues in Higher Education and provided guidance on establishment of Self Finance University. For this program Secretary Prof. K. S. Bandi, Principal Dr. K. N. Nandurkar, Mr. Ajinkya Wagh, all Principals and Heads of department and staff of various institutes of K. K. Wagh Education Society were present.

### ■ Hon. Late Balasaheb Wagh (Bhau) Death Anniversary



Hon. Late Balasaheb Wagh (Bhau)

On 6<sup>th</sup> February 2024, on occasion of second death Anniversary of Hon. Bhau, institute staff paid tribute to Hon. Late Balasaheb Wagh (Bhau) who was visionary leader and Architect of K. K. Wagh. For the program, Hon. Chairman Shri. Sameer Wagh, Principal Dr. K. N. Nandurkar, all Deans and Heads of department were present. Hon. Late Balasaheb Wagh (Bhau) was associated with K. K. Wagh Education Society since its inception. He relentlessly worked for the development of institute and insisted for quality education at all levels. Due to his visionary leadership, our institute has achieved a prominent status in the country.



## ■ Felicitation of Students who went to Dubai for Internship



Eight students of our institute had completed the internship at Dubai during Dec. 2023 to Jan. 2024. For this achievement Hon Chairman Shri. Sameer Wagh and Principal Dr K. N. Nandurkar felicitated all these students and their parents on 6<sup>th</sup> February 2024. This was first attempt to explore global opportunity.



Felicitations of Students & their Parents

Parents expressed their satisfaction about the opportunity provided and parental care taken by Prof. Dr. P. K. Shahabadkar (Training & Placement Officer) of the institute while students were staying in Dubai.

## ■ CII – CEO Connect Program



Dr. R. Venkatesh, Vice president, TDK India Pvt. Ltd delivering speech CII – CEO Connect program was organized in the institute on 17<sup>th</sup> February 2024. For the program the Chief Guest was Dr. Raghavan Venkatesh, Vice president, TDK India Pvt. Ltd. He delivered speech on topic “Career in Engineering – Challenges and Opportunities”. Principal Dr. K. N. Nandurkar felicitated the Chief Guest on this occasion. The students of the institute and staff

attended the program. The session was interactive and students asked questions related to career opportunities in engineering.



Audience for CII-CEO Connect

## ■ Neeraja Trust



Felicitations of Mr. Vasant Marathe, Trustee of Neeraja Trust

Meeting of students who got Neeraja scholarship with Mr. Vasant Marathe, Trustee of Neeraja Trust was organized in the institute on 13<sup>th</sup> February 2024. Neeraja Trust offered scholarship of Rs. 4,06,244.00 to nine students for A.Y. 2023-2024. Principal Dr. K. N. Nandurkar felicitated Mr. Vasant Marathe, Trustee of Neeraja Trust. For the meeting all heads of department and students who got Neeraja scholarship were present. Students thanked Mr. Vasant Marathe and Trust for the generous scholarship. Some of them are able to complete the studies only because of the financial assistance given by Neeraja Trust. Mr. Vasant Marathe expressed his thoughts and appealed the students to help others in whatever way possible. The tradition of donation should continue to help the needy people from Society.

## ■ Interaction of all Teaching Staff



Interaction of all teaching Faculty

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On 6<sup>th</sup> February 2024, on occasion of Death Anniversary of Hon. Late Balasaheb Wagh (Bhau), an interaction session for all teaching staff was arranged to pay tribute to Hon. Late Balasaheb Wagh (Bhau) and discuss the expectations of Management. On this occasion Principal Dr. K. N. Nandurkar, Prof. Dr. S. S. Sane (Dean Admin and Head of Computer Engineering), Prof. Dr. S. Y. Kute (Dean, Academic), Prof. Dr. D. M. Chandwadkar (Dean, Student affairs and Head of E&TC) and Dr. Mrs. Preeti Bhamre (Dean Quality and Head of IT department) interacted with the all teaching staff and shared the expectations of the Management for the progress of the institute.

### ■ Signing of MoU with Rishab Instrument Ltd., Nashik



Signing of MoU



Interaction with University of Poland

MoU is signed by our institute with Rishab Instruments Nashik and University of Zielona Gora, Poland on 20<sup>th</sup> February 2024. Principal Dr. K. N. Nandurkar and CEO Mr. Deepak Musalekar of Rishab Instruments were present. Heads of departments Prof. Dr. S. S. Sane, Prof. Dr. P. B. Kushare, Dr. R. K. Munje and Prof. Dr. P. K. Shahabadkar (TPO), were present on this occasion. An online interaction with Ms. Justyna Patalas, Prorektor of University of Zielona Gora located at Zielona Gora, Poland was arranged to discuss the opportunities of collaboration with University of Zielona Gora, Poland. She invited the academic leaders to visit the University of Poland.

### ■ Visit of ABB Team



Visit of ABB Team to AICTE Idea Lab of our institute

Visit of ABB Team was organized in the institute on 7<sup>th</sup> February 2024. The purpose of the visit was for selection of students as well as planning of Switzerland visit of 3 students who received the ABB Foundation scholarship. On this occasion Principal Dr. K. N. Nandurkar, Head of Department, Dr. P. K. Shahabadkar (TPO) were present. Institute has good relationship with ABB and it offers internship as well as job opportunities of for students. A batch of our students is also mentored by experts from ABB on problem solving techniques.

### ■ Board of Examination Meeting Under Autonomy



Board of Examination meeting under Autonomy

Board of Examination meeting under Autonomy was organized in our institute on 9<sup>th</sup> February 2024. For the meeting Dr. Mahesh Kakade, Director of Examinations & Evaluation at SPPU and other members were present. Principal Dr. K. N. Nandurkar welcomed all the members on this occasion. The results of end semester examination in first half (Dec. 2023-Jan. 2024) we approved by the committee. Prof. Dr. Mahesh Kakade appreciated the fair and transparent system of examination adopted by the Institute.

### ■ Felicitation of Electrical Engineering Students

Board Around 60 students of BE Electrical got placed in various industries during A.Y. 2023-24. Principal Dr. K. N. Nandurkar, Dr. P. K. Shahabadkar (TPO), Head of Electrical Engineering Dr. R. K. Munje felicitated to all these

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placed students for their achievements. This year around 25 companies visited for campus interview of Electrical students. Maximum package offered was Rs. 8.5 Lacs by ABB.



Felicitations of Electrical Engineering Students

### ■ Celebration of Shiv Jayanti



Celebration of Shiv Jayanti

Chatrapati Shivaji Maharaj was a great leader of Maharashtra and is inspiration for the youth. Students of our hostel celebrated Shiv Jayanti on 20<sup>th</sup> Feb. 2024 in the institute porch. Members offered garland to the statue of Chhatrapati Shivaji Maharaj and remembered his contribution in establishing Hindavi Swarajya.

### ■ Congratulations !!



Wheeler Competition 2024 conducted at Chennai. The team comprises of students from branches such as Mechanical, Robotics & Automation and Electrical Engineering. The team was guided by Prof. Dr. Vilas K. Matsagar of Mechanical Engineering Department.

Team Nikola Racing has received 1<sup>st</sup> Prize of Rs. 75000/- for the overall performance Award at the SAEISS Dr. G. Padmanabham Memorial Electric Two

### ■ Congratulations !!



Students from Robotics and Automation department Secured 1<sup>st</sup> Position in

Line following Robot in National level competition arranged by Robotex India at COEP, Pune. Principal Dr. K. N. Nandurkar, Prof. Dr. P. J. Pawar (Head of Robotics and Automation department) and staff congratulated to these students for their achievement.

### ■ Congratulations !!



Ms. Riddhi Singhavi (S.Y. AI&DS) got scholarship of Rs. 10, 000/- from SPPU for her contribution in Roll ball

competition at National level. Principal Dr. K. N. Nandurkar felicitated her for this achievement.

### ■ Expert Lecture/Seminar/Courses/Workshop Organized:

- Department of Computer Engineering organized an expert talk by Mr. Rushikesh Joshi on “Introduction to Programming in Robotics” on 3<sup>rd</sup> February, an expert talk by Mr. Nikhil Bharavkar from PDRL (Passenger Drone Research Pvt. Ltd.) on “Using AI in drones” and an expert talk by Dr. Buddha Chandrashekhar, Chief Coordinating Officer, AICTE as resource person in One-week International Level Online Student Workshop on "Data Science using Python".
- Department of Mechanical Engineering organized an expert talk by Mr. Aher Dattatrya on “Goal Achievements” on 9<sup>th</sup> February and an expert talk by Mr. Vilas Pawar on “Engineering Exploration of composite material” on 16<sup>th</sup> February 2024.
- Dept. of Information Technology organized a session on “Data Governance in Organizations” Mr. Jubin Gandhi, Vice President Chief Data Office, Barclays Global Service Centre, Pune on 23<sup>rd</sup> February 2024 and an expert session on “Process of innovation Development, Technology Readiness Level (TRL), Commercialization of

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Lab Technologies & Tec-transfer” by Er. Premalata Mishra, Director Advent Power Tech Ltd., Sinnar on 29<sup>th</sup> February 2024.

- Department of Chemical Engineering organized an expert talk of Dr V. G. Pangarkar (Ex. Professor ICT Mumbai) on topic “Packed Column design” on 9<sup>th</sup> February 2024.
- Department of Applied Science and Math department organized an expert talk on topic “Science and Technology in Vikasit Bharat” by resource person- Mr. Pushkar Hiray (Founder, Insight Science Centre, Nashik and Alumni, Indian Institute of Space Science and Technology, Thiruvananthapuram) on 20<sup>th</sup> February and an expert talk on topic “Science and Technology for Social Economical Development” by resource person- Dr. Nilesh S. Ugemuge on 28<sup>th</sup> February for the students of first year.
- Meeting of R and D Coordinators with Mr. Sangale for IPR activities was organized in the institute on 14<sup>th</sup> February 2024.
- Meeting of admission coordinators to review the work done and planned activities for AY 2024-25 was organized on 13<sup>th</sup> February 2024 as a part of admission promotion.
- An online session by Dr. Ashok Kumar Bhor was organized on topic “Academic Writing” on 20<sup>th</sup> February 2024 for staff as a part of staff development activity.
- Closing ceremony of Neuron 4.0 competition was organized on 10<sup>th</sup> February 2024. This competition was organized by ISTE Student's Chapter.

#### ■ Expert Lecture/Seminar/Courses/Workshop Attended:

- Computer Engineering Departmental staff Dr. Satish S Banait attended FDP on “Applied Cloud Computing for Full Stack web development” under Tech Saksham during 5<sup>th</sup> to 9<sup>th</sup> February 2024 as well as online FDP on “Empowering Educators: Advancement in Computing Pedagogy” during 12<sup>th</sup> to 17<sup>th</sup> February 2024.
- Chemical Engineering staff Prof. P. P Joshi attended FDP on “Process Intensification in Chemical Engineering” organized by Vishwakarma Institute of Technology, Pune during 5<sup>th</sup> to 9<sup>th</sup> February 2024 and one week online FDP on “Current Science and Developments in Biotechnology” organized by the Department of Biotechnology, Chaitanya Bharathi Institute of Technology (Autonomous), Hyderabad during 29<sup>th</sup> January to 2<sup>nd</sup> February 2024.

#### ■ Other Achievements:

- Meeting with Mr. Dinesh Muslekar, Group CEO, Rishab Instruments and Ms. Hema Bhavsar, HR Manager was conducted on 1<sup>st</sup> February 2024 as a part of Interaction with Industry Leaders.
- Principal Dr. K. N. Nandurkar and Prof. Dr. S. S. Sane (Dean Admin., and Head of Computer Engineering) attended the session on Practical implementation of NEP 2020 in Higher Educational Institute with inclusion of MKCL credit courses in Educational programs. This program was organized in Hotel Green View on 27<sup>th</sup> Feb 2024. Shri. Vivek Sawant, Mentor MKCL was the main speaker.
- Principal, HODs and staff attended the interview of Padma Vibhushan Dr. Raghunath Mashelkar at Gurudakshina Hall in Nashik on 27<sup>th</sup> February 2024.
- Principal Dr. K. N. Nandurkar, Dean and HODs attended the inauguration of new office of The Association of Management of Unaided Engineering Colleges (Maharashtra) at Pune.
- Farewell of Prof. Dr. S. S. Naik on his retirement after 33 years of service with KKWIEER was organized on 29<sup>th</sup> February 2024.

#### ■ Abstracts of papers presented during February 2024

##### “Analysis of Single-View and Multi-view K-Means Clustering on Big Data Environment

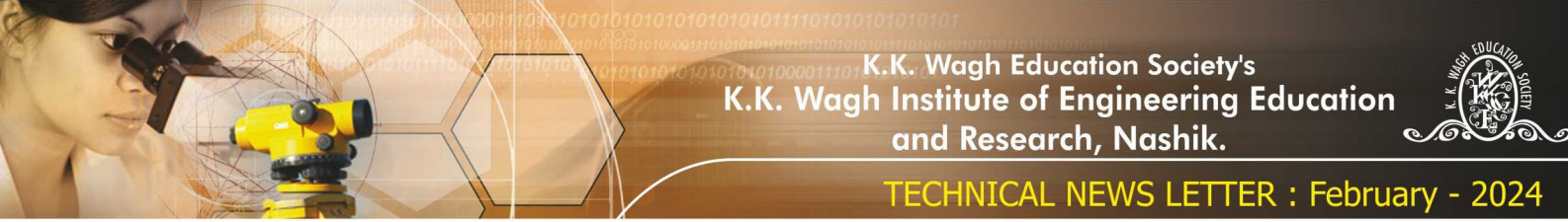
Dr. Satish S. Banait, Prof. Namrata D. Ghuse, Dr. Dipak D. Bage, Prof. Sonali N. Jadhav, Prof. Avinash A. Somatkar, & Prof. Vinod B. Bhamare

(Paper published in International Conference on Intelligent Computing and Networking - 2024 during 23-24 February 2024)

**Abstract:** Due to the revolutionary advancements in the signal sensing devices and its availability to civilians, the real time datasets are now having multiple views. Thus such a multi-view datasets are quite common in era of big data domain. As against learning of single-view, learning of multi-view has plenty of benefits. Clustering has been very useful technique in the machine learning and data mining. Traditional clustering techniques use only single set of features of the available dataset. However for the multi-view dataset with multiple features, how to ensemble all of these data views is a major concern. Thus problem is termed as multi-view clustering problem. The key benefits

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of multi-view clustering against single-view clustering are accurate description of data, reducing noises of data, and wider range of applications. This research works highlight the impact multi-view K-means clustering available in mvlearn python package with the traditional K-means clustering technique. To assess the impact of simple K-means technique and multi-view version of K-means technique, two datasets are utilized namely, nutrimouse and simulated dataset. In order to analyze the impact of multi-view clustering on clustering quality, traditional k-means technique is applied to individual views, concatenated view of the both the datasets, followed by the application of multi-view version of K-means technique on the both the datasets. We analyzed the clustering quality of multi-view K-means technique using various performance evaluation parameters such as Jaccard Coefficient (Jacc), Fowlkes Mallows Index (FM), Normalized Mutual Information (NMI), Rand Index (RI), and clustering execution times.

#### ■ **Ramrajya in Kaliyug: Finding the Inner Ram with Modern Astra (Technology)**

Ms. Priya Rakibe, Rucha Choudhari, Jai Shah & Rimzim Chark

(Paper published in Bulletin for Technology and History Journal. ISSN No: 0391-6715)

**Abstract:** The 'Ramayan' transcends being a mere epic; it unfolds as an intricate tapestry of countless lessons encapsulated in the form of Shloks. Universally, 'Lord Ram' is acknowledged as one among the ten incarnations (Avatars) of Lord Vishnu. He is revered as a symbol of righteousness, virtue, and exemplary leadership. However, beyond the realms of being a God, 'Lord Ram' emanates as an 'ideology.' This ideology constitutes a set of beliefs and values essential for steering a successful life. The wisdom derived from the Ramayan and the virtuous character of Lord Ram holds a profound impact on individuals, provided they approach them with the intent to absorb knowledge. This paper accentuates the interconnectedness of the values embodied by Lord Ram, a connectivity crucial in our contemporary world. The Ramayan, at its core, is a journey towards discovering one's 'true self,' navigating through adversity with unwavering determination, staying on the path of righteousness, and steadfastly remembering one's roots. In earlier times, students used to acquire knowledge by dedicating a significant portion of their youth to Gurukul education

system. However, in contemporary society, where attending a Gurukul is often impractical, technology the modern Astra, has become a primary source for gaining knowledge. This valuable resource is easily accessible to a vast global population, providing an alternative means of education for individuals worldwide. The paper outlines these objectives while posing pertinent questions: What does Ram mean to you? Where can one find Ram? When will you find Ram, just as Ayodhya discovered theirs? How can modern tool-technology help us to create a Ramrajya? Can Ramrajya be established even in Kaliyug?

#### ■ **Review on ML for recognition of Chat-GPT generated text**

Ms. Priya Rakibe & Ishan Dixit (Paper published Mukta Shabd Journal, UGC Care -I)

**Abstract:** Growing AI technology and use of AI tools such as OpenAI's Chat-GPT has made communication and content creation much easier than ever before. Anybody who knows how to use this tool can generate their desired content within seconds. This is a critical situation as human capability of content creation is challenged and may degrade with vital use of these tools. Chat-GPT is capable of generating human-like content, therefore it's difficult to differentiate it from human created content. To address this problem we can use Machine Learning models. Using Machine Learning algorithms will not only help in identifying Chat-GPT generated content but also will be useful in detecting plagiarism, quality text control, content creation and many more. This is a review paper which will provide higher insights on whether Machine Learning can be useful for detecting Chat-GPT generated content. Not only identification but this paper will help understand how machine learning can be used for differentiating human created content and Chat-GPT generated content.

#### ■ **Performance evaluation of multiview data using k-means clustering technique**

Mrs. Jyoti R. Mankar & Prof. Dr. S. M. Kamalapur (Paper published in International Conference on Intelligent Computing and Networking – 2024 during 23-24 February 2024)

**Abstract:** Many current systems address the scenario of single clustering, where data is partitioned using only one clustering approach.

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However, real-world data is intricate, and it can be clustered in multiple ways, contingent on diverse interpretations of the data. It is possible to offer a more comprehensive perspective of the underlying structure and increase the accuracy of the clustering process by taking into consideration numerous sources of data. In recent years, there has been a growing interest in leveraging complementary and consensus information from multiple views. However, this paper focuses on Multiview K-Means. The K-means method is better equipped to handle linearly separable input.

#### ■ **Fine Grained Visual Categorization of Dog Breeds Leveraging Deep Learning Techniques**

Mrs. Priti P. Vaidya & Prof. Dr. Snehal M. Kamalapur

(Paper published in International Conference on Intelligent Computing and Networking – 2024 during 23-24 February 2024)

**Abstract:** Image classification falls under the subdomain of computer vision, where an input image is assigned labels or categories according to its content. Advances in deep learning techniques have notably enhanced the accuracy of image classification models, especially in fine-grained categorization tasks. This includes classifying sub-categories within broader categories like various dog breeds, cat breeds, plant and bird species, and types of aircraft. The aim is to create models using deep convolutional neural networks that can automatically classify different biological species, such as dog breeds, from their respective images.

#### ■ **Analyzing impact of spectral information on multispectral image retrieval**

Mrs. Monali P. Mahajan & Prof. Dr. S. M. Kamalapur

(Paper published in International Conference on Intelligent Computing and Networking – 2024 during 23-24 February 2024)

Multispectral image retrieval involves finding images similar to a given query image. These images are stored in extensive archives tailored to specific applications. Unlike standard red, green, blue images (RGB), multispectral images encompass a broader range of spectral bands, capturing information across various wavelengths of the electromagnetic spectrum. This wealth of spectral data holds substantial details relevant to the specific application. Consequently, the retrieval of similar images

from vast archives hinges on understanding and leveraging the significance of spectral information. This research delves into examining the influence of spectral information on the However, real-world data is intricate, and it can be clustered in multiple ways, contingent on diverse interpretations of the data. It is possible effectiveness of multispectral image retrieval process

#### ■ **Deepfake Detection Using Deep Learning Techniques**

Mrs. Shital S. Bhanadre & Prof. Dr. Kamini Shirsath

(Paper published in International Conference on Intelligent Computing and Networking – 2024 during 23-24 February 2024)

**Abstract:** Nowadays, due to the tools and techniques available in the market to generate synthetic images and multimedia contents grows rapidly. These contents are at a very advanced level of reality. To identify the difference between real and fake images is very difficult for human eyes. The term used is “deepfake”, which uses the deep learning techniques to generate this fake multimedia content. Researchers are working on the tools and the techniques that are required to identify these fake multimedia contents to avoid false media communication. This review paper aims to analyze the different methods available to detect the integrity of such fake multimedia content like images and videos in the forensic analysis.

#### ■ **A study of recent trends of Artificial Intelligence and Machine Learning in Cyber Security**

Ms. Namrata M. Pagare & Ms. Monali P. Mahajan

(Paper published in National Conference on Pinnacle Perspectives: Unifying Strategies and Technologies for Tomorrow during 9<sup>th</sup> to 10<sup>th</sup> February 2024)

**Abstract:** Nowadays, artificial intelligence is used in almost every application for all age groups. Due to recent advances in artificial intelligence it has become an emerging technology in the cyber security field for safety. Cyber Security has been prone to various risks and as Artificial intelligence has a crucial role in decision making and contextual information retrieval of results by remembering user queries. Artificial intelligence has the ability to analyze patterns of behavior within a network and i





identify abnormalities which can pose a threat to security. Using Machine learning algorithms associated patterns can be identified with different types of attacks, enabling the detection of new and evolving threats. The use of artificial intelligence is going to multiply in the near future to develop strategies and plans to mitigate the risks of terror threats. The use of artificial intelligence in striving against cyber terrorism can help security agencies around the globe to stay ahead of attacks and respond quickly and effectively. In the coming future identifying, interceding, obstructing the rising spread of data for various thefts like personal data, hacks, data breaches etc. can be addressed using emerging technologies of artificial intelligence and machine learning. This work focuses on a study of recent trends to tackle problems of cyber security by using the current generation of artificial intelligence and machine learning.

#### Self-Driving Car Using Image Processing and YoloV5

Prof. Dr. Dinesh M Chnadwadkar

(Paper published in International Conference on Computer Science, Machine Learning and Algorithms (ICCPSTMLA-24) 23<sup>rd</sup>-24<sup>th</sup> February 2024 | Melbourne, Australia)

**Abstract:** This research work on the topic "Self-Driving Car using Image processing and YOLOV5 model" aims to provide a relaxed driving experience to human driver. In this paper, we propose a prototype of a self-driving car that is capable of driving on its own and detecting an obstacle, traffic signal, and stop signs. A camera module is attached at the top of the car along with a Raspberry Pi board which sends the images from surroundings to the processing unit for the processing which then predicts one of the directions of movement of the car and it also has ultrasonic sensors for monitoring the obstacles in the nearby environment to prevent any possible collision. For Sign Detection there are two methods, one is using CNN but problem with CNN is that image must be perfectly present in front of camera which is not the case with self-driving car. For avoiding this problem we are proposing YOLOV5 which is fast in response and has more accuracy than CNN. Consequently, the car moves in the desired direction by itself without any human interference.

**Index Terms:** Artificial Intelligence, Image Processing, Self-driving car, YOLOV5.

#### Sustainable supply Chain Management for optimizing operations of A Wine Industry: A Case Study

Ms.Hippalgaonkar Amrutha, Prof. Dr. Dhake Saroj, Ms. Tejashree Gaikwad

(Paper published in International Conference on "Contemporary issues in Environment, Social, Governance" Organized by Department of Accounting, GITAM School of Business, Hyderabad on 16<sup>th</sup> & 17<sup>th</sup> February 2024)

**Abstract:** A supply chain system has the competency to optimize operations functionality for value creation at every stage of the chain. Its effective integration can solve various issues pertaining to transportation, packaging, and so on. Implementing SCM and sustaining it for a longer period is the real challenge faced by the industries. This paper focuses on the growing needs of sustainable supply chain management for making elusive decisions benefiting the Company and its stakeholders. The objective is to implement different supply chain strategies for better utilization of available resources and thereby gain sustainability. A detailed study on one of the local wine companies has been elaborated wherein the company under consideration was working on improving its supply chain process. The problems related to logistics and packaging were resolved to bring down the overall cost. The study also focuses on improving the quality and speed of the supply chain process by analyzing an alternative method namely cost benefit analysis. There is always a scope to find various ways of saving costs. The company under study has been able to save costs by finding effective ways of packaging and logistics management. This creates effective results both for the company and the customers. This paper helps manufacturing or service companies to understand the importance of creating a culture of change that can bring a lot of inevitable results. It emphasizes on the way to improvise the process in the supply chain that can create cost-effective and quality product/services.

Prof. Dr. K. N. Nandurkar  
PRINCIPAL

