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K. K. Wagh Institute of Engineering Education & Research, Nashik
Department of MCA
News Letter: Coverage
Jan 2024 to July 2024

Session on "Be financially self-Reliant" by SEBI

The Department of MCA had organized a session on "Be financially self-Reliant" delivered by SEBI empaneled trainer Mili Paul on 5th February 2024 for the FYMCA students. The session on "Be financially self-Reliant" aimed to empower FYMCA students with the knowledge and skills needed to create a personalized financial plan. By understanding the importance of financial literacy and implementing practical strategies, students can develop a secure and self-reliant future. The session emphasized the role of financial planning in achieving long-term goals and highlighted the significance of taking steps towards financial independence at an early stage.

Expert talks organised

"Key Technologies for safe and Autonomous Drones"

The Department of MCA has organized an expert talk on "Key Technologies for safe and Autonomous Drones" on February 8th , 2024, with 134 students. Expert Mr. Nikhil Baravakar discussed key technologies like obstacle detection, GPS navigation, flight control algorithms, and communication protocols.

"Perception of Human Psychology in Interface Design"

The Department of MCA organized an expert talk on "Perception of Human Psychology in Interface Design" for FYMCA students on February 15, 2024. Mr. Dattatraya Aher, highlighted the importance of understanding human psychology and cultural traditions' influence on user perception.

The field of UI/UX

The Department of MCA has organized an Expert Talk on UI/UX for FYMCA students on April 2, 2024. Ms. Isha Tewani, Senior Associate UI/UX Designer, discussed user needs, preferences, and components of UI/UX design, including metaphors and mental models.

"Overview of Practical Aspects in Object-Oriented Programming"

MCA department organized an expert talk on Object-Oriented Programming on April 16, 2024. The talk, delivered by Vandana Nemade, CEO of Precise Software Consultancy, aimed to understand the concept, industry demands, and its importance in IT technology. It covered practical aspects like object-oriented analysis, programming languages, and real-world implementation.

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SQL Server

The Department of MCA had organized an "Expert Talk on SQL Server" on 19th April 2024, featuring Mr. Pratik Zambare from Yardi Softwares, discussing its architecture, features, and best practices for database management, and addressing difficulties in marking SQL programming questions.

Coding Competition

The Department of MCA has organized a Coding Competition on 28th Feb 2024 on the occasion of National Science Day for the FYMCA students. This event aims to enhance the coding skills of FYMCA students and promote their interest in computer science. The Coding Competition organized by MCA department serves as an opportunity for FYMCA students to improve their coding abilities and foster their enthusiasm for computer programming. Prof. Sujata Kangune and Prof. R. R. Patil, Assistant Professor, Department of MCA judge the competition. Prof. Nayana More organized this competition for FYMCA students under the guidance of Head of Department Dr. V. C. Bagal.

ASCEND 2K24 Technical Symposiums: A Platform for Innovation and Collaboration

The ASCEND 2K24 Technical Symposium, organized by the Department of MCA, is a platform for innovation and collaboration in the field of technology. This two-day event, scheduled on April 4th and 5th, 2024. The event aims to bring together students, academicians, and industry professionals to exchange knowledge, showcase their innovative ideas, and discuss the latest trends in the field of computer science and information technology. Participants had the opportunity to attend keynote speech by Mr. Shreyas Bramha, CEO, Nutshell, Nashik, and guidance by Dr. K. N. Nandurkar, Director, KKWIEER, Nashik. The symposium serves as a platform for networking and fostering collaborations among participants and volunteer, enabling them to gain valuable insights and work in a team. Around 350 students from various locations participated in this event. Prof. P. G. Fegade and Prof. R. R. Patil coordinated this event under the guidance of Head of Department Dr. V. C. Bagal. Mr. Akhil Ise and Mr. Tushar Shinde worked as a student coordinator for this event.

IIC with Department of MCA Celebrated the World Creativity and Innovation Day

The Department of MCA and Institute Innovation Council (IIC) celebrated the World Creativity and Innovation Day by organizing an expert session on “Graphics to Motion” on 22nd April 2024. Mr.

Vishnuvaibhav Mishra, Center Manager, Arena Animation Academy, Nashik andMs. Madhavi Pagariya, Co-founder, Arena Animation Academy, Nashik were the chief guest for this session. Mr. Mishra focused on exploring the latest trends and techniques in graphics and motion design, providing valuable insights to the participants. Participants had the opportunity to learn about cutting-edge technologies and tools used in the industry, as well as gain practical knowledge through interactive demonstration session. Through this session, the Department of MCA and the Institute Innovation Council aimed to promote creativity and innovation in the field of graphics and motion design, fostering a culture of continuous learning and growth among the participants. The session aimed to inspire and empower participants to unleash their creative potential and explore new possibilities in the field of graphics and motion design.

Lecture Series on "Augmented Reality and Virtual Reality"

The Department of MCA has organised a lecture series on "Augmented Reality and Virtual Reality" on 29th April 2024 and 4th May 2024 by the industry experts. The identified industry for this lecture series was Ultimate Internet Games Pvt. Ltd., Nashik. Mr. Swapnil Dhawan, Sr. Application Developer and Mr. Sachine Khare, Sr. Application Developer, Ultimate Internet Games, Nashik conducted the series for the FYM CA students. 6 lectures on syllabus topics were conducted during the series. Mr. Sachin Khare gives the overview of techniques used to augmented reality and virtual reality. The demonstration of installation of Unity software and overview of the environment was given by Mr. Swapnil Dhawan. Also they demonstrated the Virtual Reality device Oculus Quest to the students. Students enjoyed the lecture series and get benefited from it.

Research Paper:

Title: Autonomous Drone and the Future World

Dr. Vandana C. Bagal[1], Dr. Vijay Dhawale[2], Mrs. Jagruti R. Sohale[3], Samarth Suresh Shirsath[4]

International Research Journal of Modernization in Engineering Technology

and Science (IRJMETS), e-ISSN: 2582-5208 May 2024

Abstract: As technology is advancing drones are becoming a core part of multiple fields like in archaeology, agriculture, delivery services, surveillance, and warfare and such as many. As time passes by drones are getting more advanced, durable and stable. The fact that these sophisticated unmanned aerial vehicles can reach places humans can't reach is revolutionary. The important thing is how this autonomous aerial vehicle which we called drone works, there are multiply components which make a autonomous drone workable which are Motors and propellers, Flight control and ESC(Electronic Speed Controller), Vision and mapping(Cameras), Spatial information captured by LiDAR is available in 1D, 2D, and 3D categories, while spectral information is obtained from the Laser Return Intensity (LRI)(LiDAR), Communication in which we use multiple protocol, Automatic Path or Trajectory Planning is an important aspect of UAV autonomy unmanned aerial vehicle, Algorithm Flow which used for information processing and Simulation These simulated systems can control and monitor different parameters in a particular application by generating a virtual environment.

Study on Enhancing Traffic Law Enforcement through Automated Smart-Challan System

Mrs. Mariyam E. Maniyar, International Advanced Research Journal in Science, Engineering and Technology, DOI: 10.17148/IARJSET.2024.11571, Tejass Publishers, Online ISSN: 2393-8021, Print ISSN: 2394-1588 May 2024

Abstract: Traffic law violations have become a significant concern, contributing to the erosion of societal moral values due to widespread casual and irresponsible attitudes among drivers. Despite notable advancements in traffic laws, the persistence of human involvement in the current enforcement system remains a liability, resulting in suboptimal outcomes. This laxity fosters a culture of carelessness among drivers, exacerbated by delays and occasional inaccuracies in the delivery of paper-based and electronic challans. To address these challenges, our proposal advocates for the automation of the traffic offender identification process using advanced technologies such as object detection and tracking. By directly accessing vehicle information from the Regional Transport Office (RTO) database through number plate detection, the system generates Smart-challans promptly and accurately. These Smart-challans are then efficiently delivered to offenders via Email and SMS on the same day the offense is registered. Through this initiative, the proposed system aims to significantly enhance efficiency, accuracy, and reduce the likelihood of human error, thereby bolstering the effectiveness of traffic law enforcement efforts.

Title: An Enhanced Query Optimization Implemented in Hadoop using Bio-Inspired Algorithm with HDFS Technique

Abstract: A more effective method for massive data query optimization using HDFS and the Bio-inspired algorithm. Big Data configuration and query optimization are the two phases of the process. To remove redundant data, the input data is first per-processed using HDFS. Then, utilizing entropy calculation, features like closed frequent pattern, support, and confidence are extracted and managed. The Bio-inspired Horse Herd approach is used to group pertinent information based on this outcome. In the second step, the Big Data queries are used to obtain the same features. The optimized query is then located using the Bio-inspired technique and the similarity assessment procedure is run. The proposed algorithm, according to this research, outperforms other ones that is unique in use. It is challenging to determine the veracity of this claim without more information regarding the experimental setup and the precise measures employed to assess the algorithm's effectiveness. Furthermore, it is unknown how the proposed algorithm stacks up against other cutting-edge query optimization methods. Finally, the assess has efficiency of using this method, more optimistic query achieved and comparison analysis are proved.

Title: The YOLO Odyssey: A Deep Dive into Versions 1-9: Introducing Cersions of Algorithm, Exploring Applications and Unveiling Limitations

Abstarct: The You Only Look Once (YOLO) algorithm stands as a cornerstone in the realm of object detection, celebrated for its unparalleled accuracy and efficiency. In this research endeavour, we embark on a comprehensive exploration of the various iterations of the YOLO algorithm. Through meticulous comparative analysis, we unveil the evolutionary trajectory of each YOLO version, shedding light on the motivations behind their respective updates. Our investigation delves deep into the intricacies of target recognition and feature selection methodologies, underscoring the algorithm's continual refinement. Furthermore, this study offers valuable insights into the applications of YOLO in diverse domains, including the financial sector. By elucidating the nuances of YOLO and its counterparts, this paper enriches the discourse surrounding object detection literature.

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