

Dr. D. Y. Patil
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Dr. Sushant Patil
President, DYPEF

Dr. Suresh Mali
Principal, DYP COEI

Department of Computer Engineering

December Month Report:

Faculty Achievement:

Faculty Participation



Prof. (Dr.) Alpana Adsul, Head, Department of Computer Engineering successfully completed Microsoft, SAP & AICTE sponsored Faculty Development Program on “Applied Cloud Computing for Full Stack Web Development” under TechSaksham from 4th – 8th December 2023.

Cloud computing and full-stack development technologies can be used together to deploy, scale, and maintain web applications easily and efficiently. Full-stack web development means developing the front-end and back-end of any web application.



Prof. (Dr.) Alpana Adsul, Head, Department of Computer Engineering certificate of Microsoft, SAP & AICTE sponsored FDP on “Applied Cloud Computing for Full Stack Web Development” under TechSaksham from 4th – 8th December 2023.

Full-stack developers are responsible for the user interface (UI), the user experience (UX), and the underlying code that runs the web application. Full-stack developers normally utilize various programming languages and technologies, such as CSS, JavaScript, HTML, Python, Java, PHP, etc. Full-stack web development also includes different web architecture and design principles.





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There are numerous advantages of using cloud computing and full-stack development together for web applications, which are listed below.

- Decreased Costs, High Agility, Enhanced Security.
- Better Collaboration, Scaling.
- Reach Global audience and Experiment with New Ideas.
- Stay Up-to-date with The Latest Technologies.

Faculty Publication



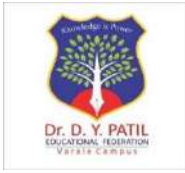
Mr. T. Arivanantham, Assistant Professor, Department Computer Engineering presented paper on "Forecasting Employees Churn Analysis using Selected Machine Learning Models" the paper was published at the 2nd International Conference on Automation, Computing and Renewable Systems (ICACRS-2023).

In the context of a business setting, the process of analysing and measuring the rate at which workers leave a company, as well as determining which people are most likely to depart, is referred to as employee churn analytics. This kind of analysis may also be used to anticipate which individuals are most likely to leave.



Mr. T. Arivanantham certificate of participation at the 2nd International Conference on Automation, Computing and Renewable Systems (ICACRS-2023).





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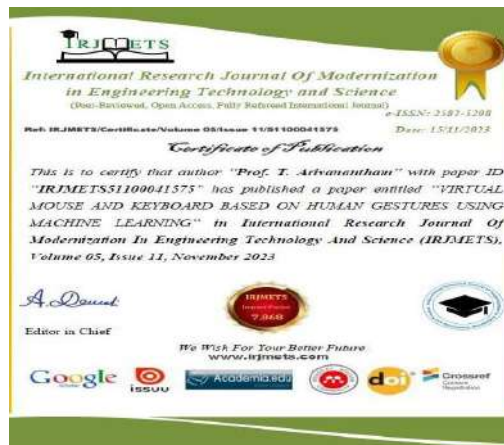
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Because of the continuously shifting requirements in many businesses, workers often find themselves in a position to pursue new employment opportunities. Because of this, companies are obligated to look for potential successors who already have the experience and education necessary to properly carry out the tasks that are involved with the role. In the event that a bottleneck occurs, the corporate sector will be required to make extra financial investments in order to return the organization's workday to its previously established pattern of operation. During the course of investigation, the study analysis number of machine learning (ML) algorithms that concentrate on reviewing the history of an employee and evaluating a variety of characteristics in an efficient way. The purpose of these methods is to determine whether or not the employee will continue working for the firm or will at some point in the future depart the business.

Virtual Mouse and Keyboard Based on Human Gestures using Machine Learning: Now a day's computer vision has reached its pinnacle, where a computer can identify its owner using a simple program of image processing.



Mr. Kunal Sanjay Swami, Mr. Shubham Ugalmugale, Mr. Dattatraya Giri, Mr. Swami Kunal Anil and Prof. T. Arivanantham published paper on " Virtual Mouse and Keyboard Based on Human Gestures using Machine Learning" in IRJMETS Volume 05, Issue 11, November 2023.





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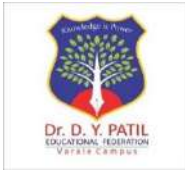
In this stage of development, people are using this vision in many aspects of day to day life, like Face Recognition, Color detection, Automatic car, etc. In this project, computer vision is used in creating an Optical mouse and keyboard using hand gestures. The camera of the computer will read the image of different gestures performed by a person's hand and according to the movement of the gestures the Mouse or the cursor of the computer will move, even perform right and left clicks using different gestures. Similarly, the keyboard functions may be used with some different gestures, like using one finger gesture for alphabet select and four-figure gesture to swipe left and right. It will act as a virtual mouse and keyboard with no wire or external devices. The only hardware aspect of the project is a web-cam and the coding is done on python using Anaconda platform. Here the Convex hull defects are first generated and then using the defect calculations an algorithm is generated and mapping the mouse and keyboard functions with the defects.



Mr. Vishal Borate, Assistant Professor, Department of Computer Engineering published paper on "Design of Low- cost Wireless Noise Monitoring Sensor Unit based on IOT Concept" in a Journal of Emerging Technologies and Innovation Research(JETIR) Volume 10, Issue 12, December 2023.

Design of Low- cost Wireless Noise Monitoring Sensor Unit based on IOT Concept: The rapid growth of wireless sensor networks (WSN) in urban areas has created the potential for the development of significant volumes of information data from environmental monitoring systems, with excessive urban noise pollution ranking as one of the most alarming. The low-cost wireless sensor networks offer a technique for achieving data collecting and analysis with a higher level of granularity than the usual noise mapping procedures, which involve an expensive and time-consuming measuring process using a classic high-priced noise level meter.





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The Internet of Things (IoT) and the concept of a "smart city" are presented in this study as a framework for a wireless noise sensor unit design for continuous environmental noise level monitoring. The idea includes the entire noise data information system, starting with sensors.



Mr. Vishal Borate certificate of participation in Journal of Emerging Technologies and Innovation Research (JETIR) Volume 10, Issue 12, December 2023.

Fire Evacuation System Using IOT & AI: The Internet of Things (IoT) :is an environment in which physical devices can transmit data over a network, thus eliminating human-human or human-computer interactions.



Mr. Vishal Borate published paper on “Fire Evacuation System Using IOT & AI” in IJRAR Volume 10, Issue 4, November 2023.





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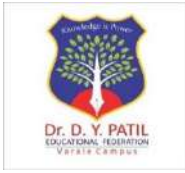
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The Internet of Things refers to a network that connects everything through sensors and communication devices, including the connection between objects, people, and objects. Research efforts are looking at technologies that enable objects to communicate with each other and with their users to provide information and/or complete tasks. An emergency is a serious, unexpected and often dangerous problem that requires immediate attention. Early warning systems (EWS) are increasingly used to reduce the risks posed by natural disasters and provide early warning.

Internet of Things (IoT)-based emergency evacuation services (EES) are designed to make evacuations more efficient, safer, and less expensive. Arduino Mega Sens sensors connected to temperature, humidity and vibration values. If any of these values exceed the threshold, an LED warning light will illuminate. Residents of the home were alerted via mobile phone. The app also guides you to the nearest safety post and provides directions based on your location. Evacuation information can help people find the right escape route. Therefore, emergency evacuation is not just a preparation exercise.

A Novel Approach for Filtration of Spam using NLP: Email is a crucial tool for business correspondence in the current era of technological communication. As a result, it is now more important than ever to precisely classify emails as either spam or real (ham). The problem is not only in selecting the best classifier but also in dealing with poison and impersonation attacks, even though standard methods for spam detection generally rely on text-based or collaborative approaches. Email content analysis is combined with social network and email-related characteristics in our suggested model to provide a powerful spam filtering solution. Header parsing is done on incoming emails to assess the sender's reliability and standing among recipients. The topic of the email is determined using keyword parsing, which makes use of LDA and Gibbs Sampling. The model also takes into account the number and quality of connections people have within social networks.





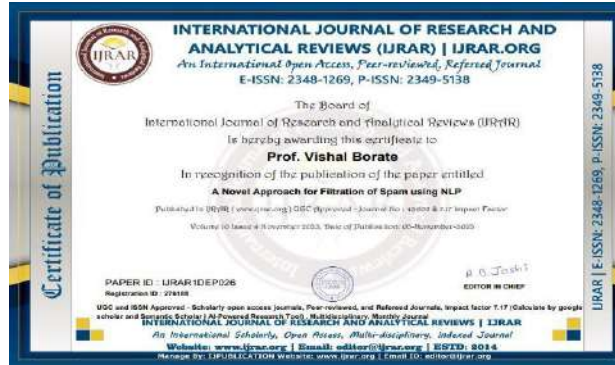
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