

Editorial

What is in the first issue of the International Journal of Technology Engineering Arts Mathematics Science?

We are happy to inform you that the first issue of the **International Journal of Technology Engineering Arts Mathematics Science (IJTEAMS)** is now online. This issue contains interesting papers on topics of machine learning, cryptography, tamper detection, condition monitoring, automation, and energy systems. The papers are written in clear and simple language. We hope that the papers presented in the first issue are useful to researchers.

N. R. Dhumale proposes a method of Remaining Useful Life (RUL) prediction of DC electrolytic capacitor. This method employs information from the simulation model supported by non-linear equations. A dataset of RUL forecasts equivalent to several permutations of operating conditions is achieved through simulations, as well as an identical dataset is utilized to develop a model for RUL prediction.

In the water board system, the user has to purchase a mobile Bluetooth-based recharge card and it should be inserted in the slot provided on the prepaid flow meter kit. The user has to recharge and after successful recharge, the water supply automatically gets ON. Tejas Yeole, Sagar Patil, Divya Sahare, and Mousami Vanjale provide the best solution for the users to know how much the amount of water is consumed in their day-to-day life and also the amount consumed is under the user's control. The system ensures a steady, safe, and sufficient water supply required by the user without wasting the water along with a flexible billing cycle.

The paper entitled "Machine Learning algorithms and their applications: A survey" by Poonam S. Jadhav and Punashri M. Patil present different learning algorithms and applications. Detail explanations of Supervised Learning Algorithms and Unsupervised Learning Algorithms with their different types are

explained. The Supervised Learning Algorithms like linear regression, non-linear regression, and decision trees are nicely explained by the authors. The algorithms related to Unsupervised Learning Algorithms like clustering and association are explained in simple language.

A. D. Shiralkar and S. M. Bakre highlight the act of tampering of meters by inserting resistance in parallel as well as series across the meter and reducing the amount of billing current. Also, the novice and cost-effective method to detect this event is suggested in this paper. In the advent of the upcoming Internet of Things (IoT) technology, the tamper can be detected using intelligent sensors provided at instrument transformers and meters. The inputs received from IoT-based sensors are fed to the microcontroller through internet media.

To mitigate harmonics, it is required to conduct their measurements. Harmonics are measured mainly by harmonic analyzers which are based on Fourier Series. However, several parameters are not measured by Harmonic Analyzers. S. M. Bakre, A. D. Shiralkar, and S. V. Shelar discuss a novice method for computation of such parameters. Python is taken as a programming tool for computational algorithms.

A technique of steganography and cryptography for securing the data is proposed in a paper titled 'Image-based steganography using cryptography by Anuja Phapale, Rijil Daniel, Pranav Deshmukh, Dhanesh Lunkad, and Yogesh Thadani. In which the LSB method is used for embedding and extracting the data from the image. Asymmetric cryptographic algorithm used to encrypt the data is done by using Armstrong numbers before embedding the data into the image. A key is generated using Armstrong numbers & any specified string and the same key generated is used for encrypting & decrypting.

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