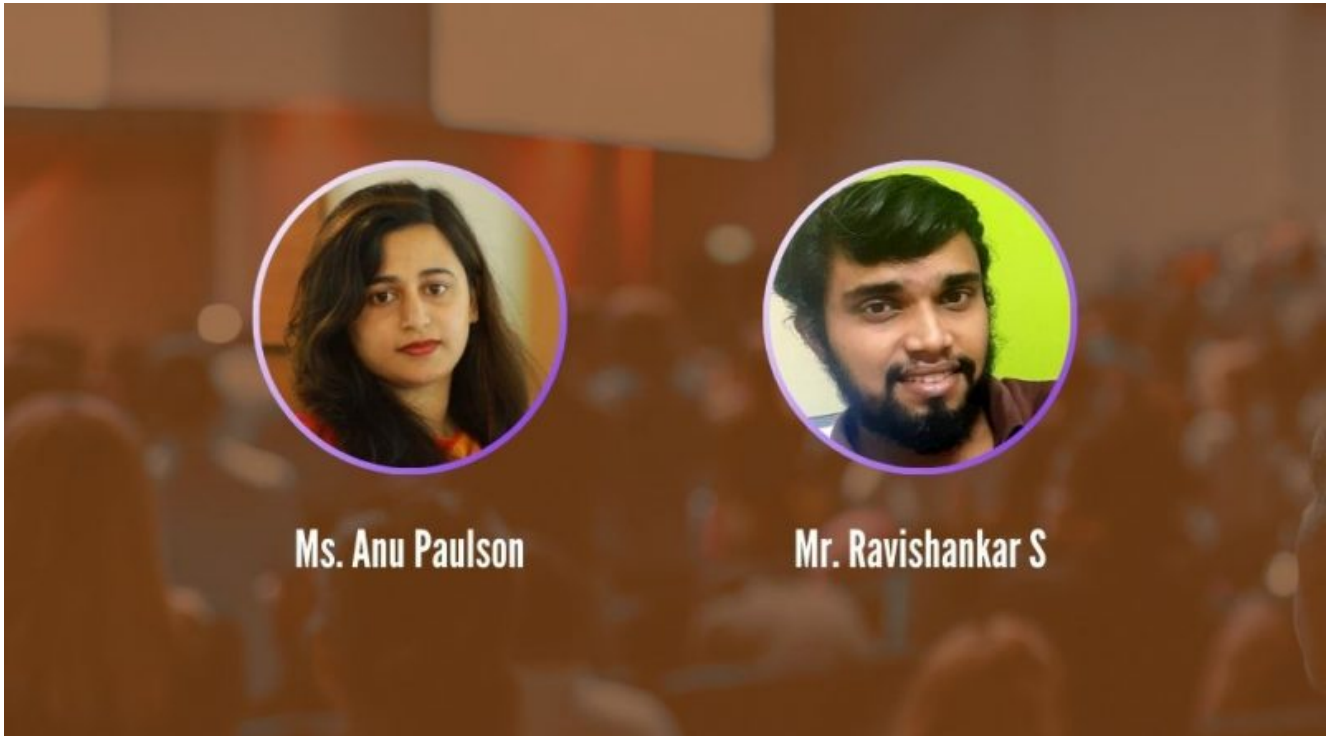


Research paper from CSE Dept published in IEEE Xplore



A research paper titled “*AI Based Indigenous Medicinal Plant Identification*” and authored by Anu Paulson (S4 M Tech CSE) and

Ravishankar S (AP, CSE Dept) has been published in the Proceedings of the International Conference on “2020 Advanced Computing and Communication Technologies for High Performance Applications (ACCTHPA)” held at FISAT, Angamaly during 2 – 5 July 2020. The Proceedings of the Conference has been published in IEEE Xplore which is a powerful resource for discovery of scientific and technical content published by the IEEE (Institute of Electrical and Electronics Engineers) and its publishing partners. The paper can be accessed at <https://ieeexplore.ieee.org/document/9213224>.

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"AI Based Indigenous Medicinal Plant Identification"

Abstract of the paper

In preserving the physical and psychological state of persons, ayurvedic medicines have an important role. The research aims to identify indigenous ayurvedic medicinal plant species using deep learning techniques. The social relevance of the proposal is so high as it would solve the problems of a wide range of stakeholders like physicians, pharmacy, government, and public. The identification of rare plant species may lead to a significant impact on the research associated with medical and other related areas.

Another application can be the identification of plant species in forest and remote areas, where access to humans is limited. In such cases, the image of a particular plant species may be captured using drones and further analyzed. Currently, a lot of research work has been going on in the area of plant species identification using machine learning algorithms. The performance of Convolutional Neural Network (CNN), and pretrained models VGG16, and VGG19 has been compared for leaf identification problem. The dataset proposed in this research work contains indigenous medicinal plants of Kerala. The dataset consists of leaf images of 64 medicinal plants. CNN obtained a classification accuracy of 95.79%. VGG16 and VGG19 achieve an accuracy of 97.8% and 97.6% respectively, outperforms basic CNN.