

IGNITE 2023



A DAILY NEWSLETTER

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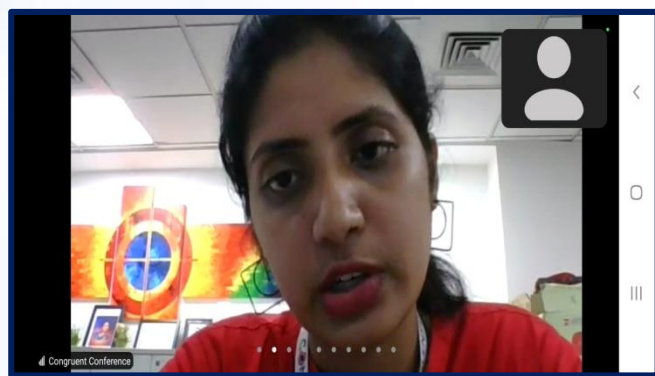
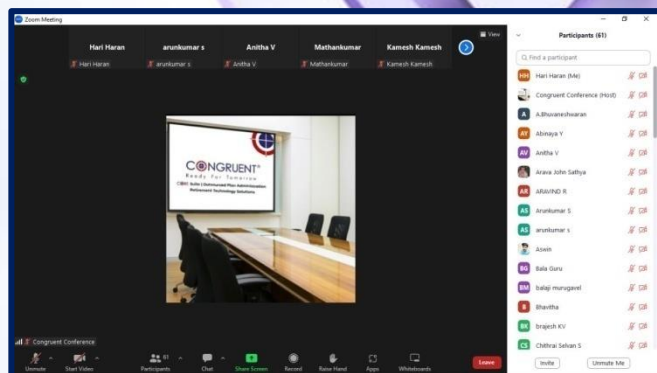
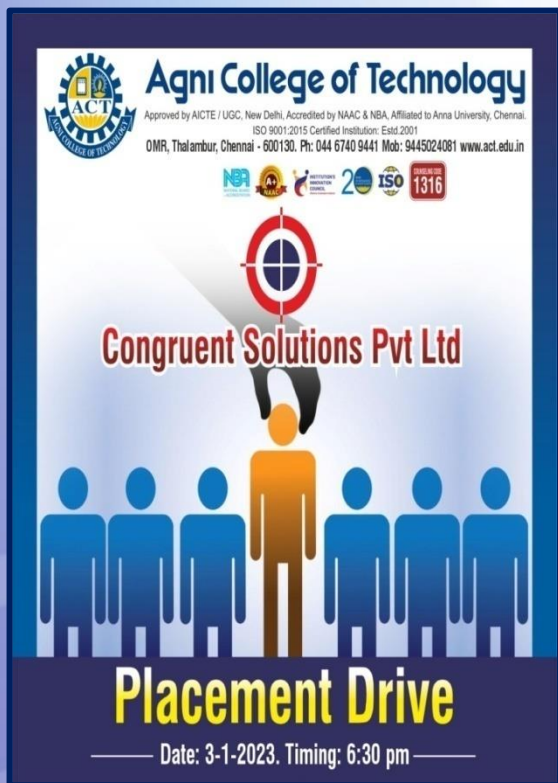


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PLACEMENT DIVISION



The final year students attended **Placement Drive Pre Placement Talk & Online Aptitude Assessment** organized by **Congruent Solutions Pvt Ltd**, Chennai on 3rd January 2023 for the post of Trainee - Process Associate with CTC of 3LPA.

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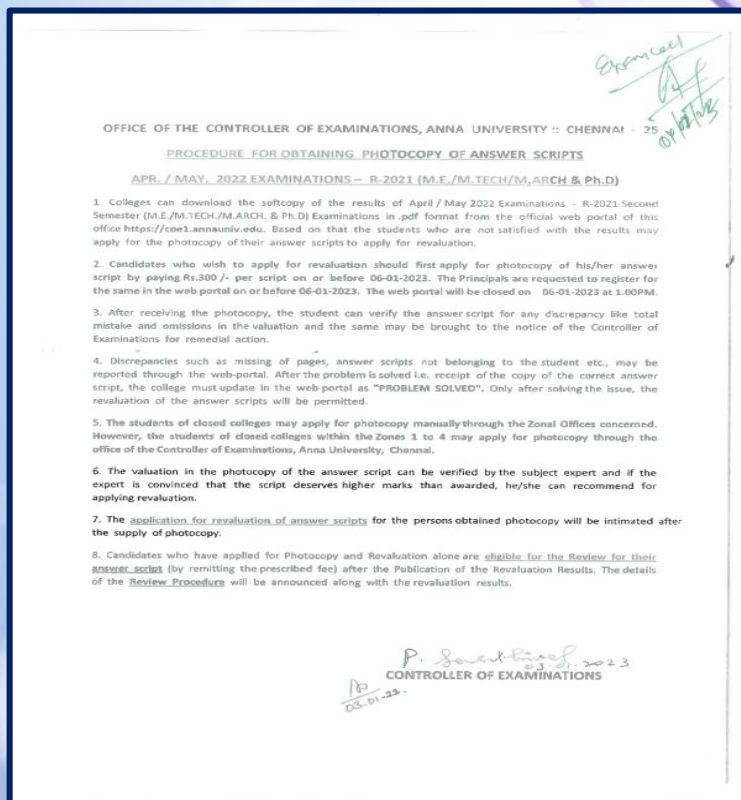


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OFFICE OF EXAM CELL



The College has received a Revaluation Circular from COE, Anna University, Chennai for PG - II Semester AM22 Examination. Last date for applying revaluation is on 6th January 2023.

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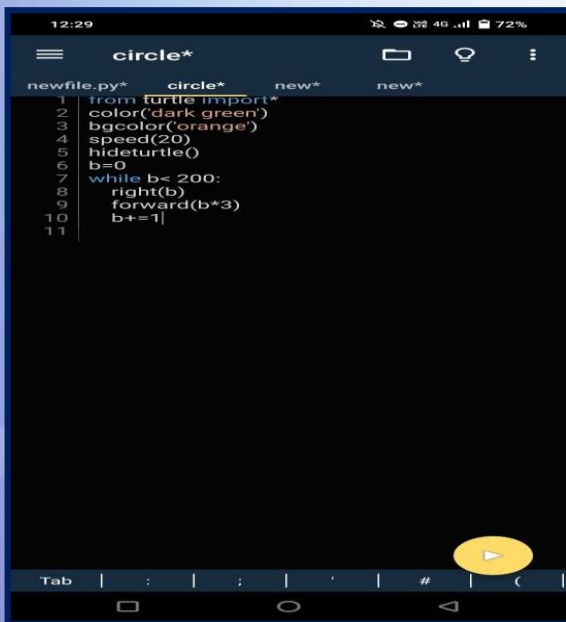
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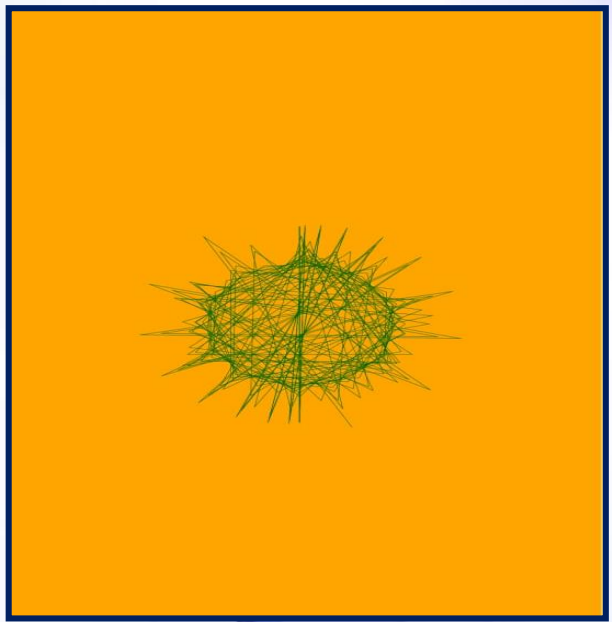
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STUDENT ACHIEVEMENT



```
12:29
circle*
newfile.py* circle* new* new*
1 from turtle import*
2 color('dark green')
3 bgcolor('orange')
4 speed(20)
5 hideturtle()
6 b=0
7 while b< 200:
8     right(b)
9     forward(b*3)
10    b+=1|
11
```



Preethi, I year student (ECE), Department of Science and Humanities has programmed the **Symbol of Corona Virus** using turtle in **Python Programming**.

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STUDENT ACHIEVEMENT



Ajay Kumar M, I year student (IT), Department of Science and Humanities has completed the online course on **Python Fundamentals for Beginners** offered by Great Learning Academy in the month of January 2023.

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STUDENT ACHIEVEMENT



Vignesh V, I year student (IT), Department of Science and Humanities has completed the online course on **Python for Non - Programmers** offered by Great Learning Academy in the month of January 2023.

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STUDENT ACHIEVEMENT



Mukesh, I year student (IT), Department of Science and Humanities has completed the online course on **Data Science Foundations** offered by Great Learning Academy in the month of January 2023.

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STUDENT ACHIEVEMENT



Aadhithan, I year student (EEE), Department of Science and Humanities has completed the online course on **Python Projects** offered by Great Learning Academy in the month of January 2023.

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FACULTY ACHIEVEMENT



Dr. Arul Kulandaivel, Head, Department of Science & Humanities has published a research article on **Influence of Different Thermal Conductivity on the mobility of Airborne Particulates in IC Engine Parallel Plate Convection Circulation** in the Journal of Computer Integrated Manufacturing Systems, a Scopus Indexed.

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FACULTY ACHIEVEMENT

NeuroQuantology | December 2022 | Volume 20 | Issue 20 | Page 1622-1631 | doi: 10.48047/NQ.2022.20.20.NQ109166
Rajesh Kanna.R / Classification of Diseases in Rice Crops using Deep Convolutional Neural Networks for Agricultural Applications

Classification of Diseases in Rice Crops using Deep Convolutional Neural Networks for Agricultural Applications

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Abstract:
Agricultural crops are the important sources of energy, and are the primary way to resolve the crisis of global warming. There are various diseases that affect the agricultural crop health with the potential to source disturbing social, economical, and ecological losses. Over number of agricultural crops, rice acts as the major grain all over the world, and hence it is important to identify the type of the disease that attack the rice crop at early as possible in such a way to choose the proper pesticide to be used. This paper proposes a deep convolutional neural network (Deep CNN) based disease classification strategy for rice crop with the aid of the significant features of the input image. The proposed strategy possesses enhanced convergence characteristics and capable to deal with dataset of larger size. The effectiveness of the proposed model is deliberated by comparing the performance with the existing methods, in terms of the performance metrics, such as accuracy, precision, and recall. The accuracy, precision, and recall of the proposed method are attained to be 95.9181%, 94.2515%, and 97.125%, respectively, which shows the superiority of the proposed method in classification of diseases in rice plant.

Keywords: Agriculture, rice crop disease classification, crop health, pesticide, deep Convolutional neural network.
DOI Number: 10.48047/NQ.2022.20.20.NQ109166

1. Introduction

Rice, maize and wheat are the three commonly used crops of food sources throughout the world [7]. Among the three, rice exhibit the most sown field, the largest total production and the maximum yield per unit, and acts as one of the major grains all over the world [8]. It has been predicted that by 2050, the population of the world will become more than nine billion [9]. Yet, the diseases in rice crop have been acutely deteriorating the production of rice. As a result, it is an immense task for the agricultural society to make sure the food security of such a huge population. During the growing stage of rice, various diseases are often escorted, such as sheath blight, rice blast, rice curl disease, leaf smut, bacterial leaf blight disease, and brown spot and so on. These diseases crop up in throughout the rice crop. Among the number of diseases, leaf smut, brown spot, and bacterial leaf blight are the three common diseases with the largest probability of occurrence and exhibit huge influence [4]. The crop diseases not only affect the production of crop, but also lead to ecological pollution. According to a recent survey, a loss of about 10–15% of rice crop production is originated by diseases [10]. In some cases, it may reach up to 40–50% or even no profits, leading to huge losses in economy to the cultivators who have worked hard for a year.

This is due to the reason, farmers usually do not be familiar enough about the diseases of rice crops, so they cannot completely know the event of each disease and its specific features, and thus cannot judge the disease and use the pesticides in time. Hence, high, low, or even wrong pesticides may be used, affecting the cure of disease and harm the environment and the soil. Thus, it is necessary to identify the disease and the type of disease as quick as possible to use the correct pesticide. Generally, the detection of diseases in rice plant depend either on visual estimation of the indications or the investigational outcomes by culturing pathogens in



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www.neuroquantology.com

Ms. G. Uma Devi, Assistant Professor, Department of Computer Science and Engineering has **published a paper on Classification of Diseases in Rice crops using Deep convolution neural Networks for Agricultural Applications** in Neuroquantology Journal (Scopus Indexed) on 27th December 2022.

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FACULTY PARTICIATION



Sarjun Beevi. S, Assistant Professor, Department of Computer Science and Engineering has participated in a 5 day virtual **FDP on Recent Advancements in Science & Engineering** organised by Regional College of Education Research and Technology, Jaipur from 26th to 30th December 2022.

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