पेटेंट कार्यालय
शासकीय जर्नल

OFFICIAL JOURNAL
OF
THE PATENT OFFICE

निर्गमन सं. 02/2025	शुक्रवार	दिनांक: 10/01/2025
ISSUE NO. 02/2025	FRIDAY	DATE: 10/01/2025

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :23/12/2024

(21) Application No.202441102256 A

(43) Publication Date : 10/01/2025

(54) Title of the invention : Rice Blast Disease Prediction Using Integrated Smote With Multilayer Perceptron

(51) International classification :A01G0022220000, G06Q0050020000, G06Q0010040000, A01B0079000000, A01H0001040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)**Name of Applicant :**
1)Dr. H. Harikrishnan Assoc.Prof, Dept. of Pharmaceutical Technology, PEC,TN
Address of Applicant :Paavai Engineering College (Autonomous), Pachal, Namakkal District, Tamil Nadu-India-637018. ---------- ----------
2)Mr.Asif Ali Salauddin Jamadar Asst. Prof, Dept. of ECE, MMEC, Karnataka
3)Mrs. Rushda AsifAli Jamadar UG Scholar, Dept. of CSE, MMEC, Karnataka
4)Dr. Mala H. Mehta Asst. Prof, Dept. of IT, SVIT, Gujarat
5)Ms. P. Gayathri Asst. Prof, Dept. of S&H, KCE, Tamilnadu
6)Dr. Falguni M. Patel Asst. Prof, Dept. of IT, SVIT, Gujarat
7)Prof. Sneha A. Gaywala Asst. Prof, Dept. of IT, SVIT, Gujarat
8)Dr. Ch. Asha Immanuel Raju Assoc.Prof, Dept. of Chemical Engineering,AUCE,AP
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Dr. H. Harikrishnan Assoc.Prof, Dept. of Pharmaceutical Technology, PEC,TN
Address of Applicant :Paavai Engineering College (Autonomous), Pachal, Namakkal District, Tamil Nadu-India-637018. ---------- ----------
2)Mr.Asif Ali Salauddin Jamadar Asst. Prof, Dept. of ECE, MMEC, Karnataka
Address of Applicant :Maratha Mandal Engineering College, R.S. No.104 Village, Halbhavi Camp, Belagavi, Karnataka-India-591113. ---------- ----------
3)Mrs. Rushda AsifAli Jamadar UG Scholar, Dept. of CSE, MMEC, Karnataka
Address of Applicant :Maratha Mandal Engineering College, R.S. No.104 Village, Halbhavi Camp, Belagavi, Karnataka-India-591113. ---------- ----------
4)Dr. Mala H. Mehta Asst. Prof, Dept. of IT, SVIT, Gujarat
Address of Applicant :Sardar Vallabhbhai Patel Institute of Technology, Near Vasad Bus Depot, Vasad Anand, Gujarat-India –388306. ---------- ----------
5)Ms. P. Gayathri Asst. Prof, Dept. of S&H, KCE, Tamilnadu
Address of Applicant :Karpagam College of Engineering, Coimbatore–Tamilnadu-India, 641032. ---------- ----------
6)Dr. Falguni M. Patel Asst. Prof, Dept. of IT, SVIT, Gujarat
Address of Applicant :Sardar Vallabhbhai Patel Institute of Technology, Near Vasad Bus Depot, Vasad Anand, Gujarat-India –388306. ---------- ----------
7)Prof. Sneha A. Gaywala Asst. Prof, Dept. of IT, SVIT, Gujarat
Address of Applicant :Sardar Vallabhbhai Patel Institute of Technology, Near Vasad Bus Depot, Vasad Anand, Gujarat-India –388306. ---------- ----------
8)Dr. Ch. Asha Immanuel Raju Assoc.Prof, Dept. of Chemical Engineering,AUCE,AP
Address of Applicant :Andhra University College of Engineering, Andhra University, Visakhapatnam, Andhra Pradesh, India- 530003. ---------- ----------

(57) Abstract :
Agriculture is the primary source of income for the major population of India. Agriculture generates 17% of the total GDP of India and India is the second-largest producer of rice and wheat. Rice (Oryza sativa) is a major food crop for many parts of India. India has the largest area under rice cultivation; hence rice is the important crop of the country. Rice is such a major cereal crop, which provides 20% of total energy and leads as the main food for more than 50% of the world's population. Rice production has been challenged by recent changes in crop production technologies, that also has impact on disease occurrence. Thus, crop management includes extensive use of fertilization, repeated flooding increases the disease problem, increased monoculture of rice helps in support of pathogens from one crop to another crop. The Rice crop in India has affected by many pathogens. Among 36 rice diseases, rice blast is the disease caused by Magnaporthe Oryae, is the major destructive disease of paddy crop. This disease having significant threat to the production of paddy crops all over the country. Rice blast continues to be a cryptic problem in several rice-growing regions (tropical and temporal) where the pathogen spreads exponentially and is difficult to manage by the farmers and thus reduces yield of paddy crop in the field. In India, rice blast is a major concern due to favorable weather conditions during the crop season. Climate plays major role in the disease appearance, multiplication, and spread of the fungus. Along with climatic factors, the varieties of seeds also influence the occurrence of rice blasts, primarily the climate factors have a strong influence on the occurrence of blast disease even though a sufficient amount of nutrients are present in the plant. Thus, rice blast disease will occur and develop when certain weather conditions continue for the given period. Forecasting models that make predictions of possible blast disease occurrence may give important information to the producers of rice to manage the disease. Therefore, this project implements the rice blast disease prediction using data balancing technique based multilayer perceptron.

No. of Pages : 11 No. of Claims : 5