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(54) Title of the invention : DEVELOPMENT OF IMAGE PROCESSING BASED FRUIT SPOILED DETECTION SYSTEM

(51) International classification	:G06K0009000000, G06K0009460000, G06T0007136000, G06F0011340000, G01N0021880000	(71)**Name of Applicant :** 1)**Dr. S. SHAJUN NISHA** Address of Applicant :HEAD, PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE, SADAKATHULLAH APPA COLLEGE, RAHMATH NAGAR, TIRUNELVELI, TAMIL NADU Tamil Nadu India 2)**Dr.R.Ablin** 3)**R. Ratchana** 4)**Dr.M.Suresh** 5)**Dr PRIYADHARSHINI BHUPATHI** 6)**Suresha D** 7)**Mr. J.S.PRASATH** 8)**Akshay S** 9)**Dr.N.B.Prakash** 10)**Mr.S.Prathap** 11)**Dr. M.VIJAYA BHASKAR REDDY MOPUR** 12)**Dr.R.Athilingam** 13)**Dr. Vishal Jain** 14)**Dr. MOHAMED JAFFER SADIQ MOHAMED** 15)**Dr. MAHALINGA V MANDI**
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(57) Abstract :
Automation of plant recognition is an important process for the fields working plants. This presents an approach for plant recognition using fruits images. In this new product innovation, the proponents demonstrated the development of the system that gives users the ability to identify fruits based on photographs of the leaves taken with the high definition camera. The output parameters are used to compute well documented metrics for the statistical and shape. The system can extract the physical parameters from the fruit image that will be used in identifying fruits. The aim is to build an accurate fast and reliable fruit detection system. From the extracted vegetable parameters, the system provides the statistical analysis and general information of the identified fruit. At the heart of this system is a modernized process of identification, so as to automate the way of identifying the fruit plants through fruit image and digital image processing. The system used the Gabor Filter, Edge Detection, RGB colour and Gray Scale image to acquire the physical parameter of the leaves.

No. of Pages : 17 No. of Claims : 2

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FORM 1
THE PATENTS ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003
APPLICATION FOR GRANT OF PATENT
[See sections 7,54 & 135 and rule 20(1)]
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3. TITLE OF THE INVENTION: Development of Image Processing based Fruit Spoiled Detection System

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5. PRIORITY PARTICULARS OF THE APPLICATION(S) FILED IN CONVENTION COUNTRY:

Sr.No.	Country	Application Number	Filing Date	Name of the Applicant	Tilte of the Invention

6. PARTICULARS FOR FILING PATENT COOPERATION TREATY (PCT) NATIONAL PHASE APPLICATION:

International Application Number	International Filing Date as Allotted by the Receiving Office
PCT//	

7. PARTICULARS FOR FILING DIVISIONAL APPLICATION

Original (first) Application Number	Date of Filing of Original (first) Application

8. PARTICULARS FOR FILING PATENT OF ADDITION:

Main Application / Patent Number:	Date of Filing of Main Application

9. DECLARATIONS:

(i) Declaration by the inventor(s)

I/We ,Dr. S. SHAJUN NISHA,Dr.R.Ablin,R. Ratchana,Dr.M.Suresh,Dr PRIYADHARSHINI BHUPATHI,Suresha D,Mr. J.S.PRASATH,Akshay S,Dr.N.B.Prakash,Mr.S.Prathap,Dr. M.VIJAYA BHASKAR REDDY MOPUR,Dr.R.Athilingam,Dr. Vishal Jain,Dr. MOHAMED JAFFER SADIQ MOHAMED,Dr. MAHALINGA V MANDI, is/are the true & first inventor(s) for this invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: 2/2/21

(b) Signature(s) of the inventor(s): ....

(c) Name(s): Dr. S. SHAJUN NISHA,Dr.R.Ablin,R. Ratchana,Dr.M Suresh,Dr PRIYADHARSHINI BHUPATHI,Suresha D,Mr. J.S.PRASATH,Akshay S,Dr.N.B.Prakash,Mr.S.Prathap,Dr. M.VIJAYA BHASKAR REDDY MOPUR,Dr.R.Athilingam,Dr. Vishal Jain,Dr. MOHAMED JAFFER SADIQ MOHAMED,Dr. MAHALINGA V MANDI

(ii) Declaration by the applicant(s) in the convention country

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: 2/2/21

(b) Signature(s) : ....

(c) Name(s) of the singnatory: Dr. S. SHAJUN NISHA,Dr.R.Ablin,R. Ratchana,Dr.M.Suresh,Dr PRIYADHARSHINI BHUPATHI,Suresha D,Mr. J.S.PRASATH,Akshay S,Dr.N.B.Prakash,Mr.S.Prathap,Dr. M.VIJAYA BHASKAR REDDY MOPUR,Dr.R.Athilingam,Dr. Vishal Jain,Dr. MOHAMED JAFFER SADIQ MOHAMED,Dr. MAHALINGA V MANDI

(iii) Declaration by the applicant(s)

• The Complete specification relationg to the invention is filed with this application.
• I am/We are, in the possession of the above mentioned invention.
• There is no lawful ground of objection to the grant of the Patent to me/us.

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

Sr.	Document Description	FileName

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated hering are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this(Final Payment Date): 2-3-21

Signature: