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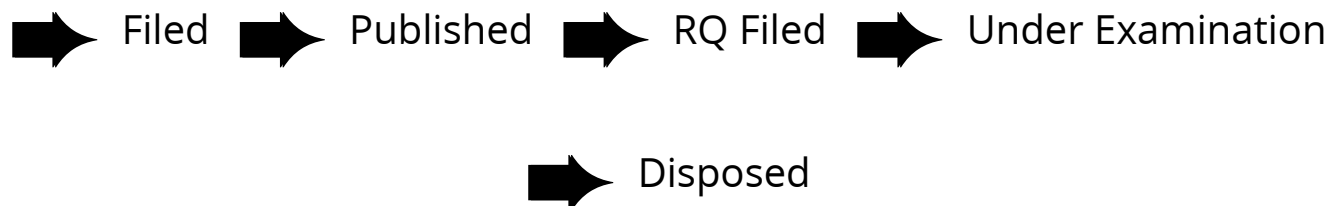


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Application Details	
APPLICATION NUMBER	202041008893
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	02/03/2020
APPLICANT NAME	1 . MRS. B DHANALAXMI 2 . MR. N V KRISHNA RAO 3 . MR.G SAI CHAITANYA KUMAR 4 . MRS. MANUKONDA ASHOKA DEEPTHI 5 . MRS. N M DEEPIKA 6 . MR. MULUGU NARENDHAR 7 . DR. G. ANIL KUMAR 8 . MRS.K.DEEPTHI 9 . MR YELIGETI RAJU
TITLE OF INVENTION	AR-Mining Technique : ADAPTIVE PSO BASED ASSOCIATION RULE MINING TECHNIQUE FOR SOFTWARE DEFECT CLASSIFICATION USING ANN
FIELD OF INVENTION	COMPUTER SCIENCE
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E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	06/03/2020

Application Status

APPLICATION STATUS

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Patent Search

Invention Title	AR-Mining Technique : ADAPTIVE PSO BASED ASSOCIATION RULE MINING TECHNIQUE FOR SOFTWARE DEFECT CLASSIFICATION USING ANN
Publication Number	10/2020
Publication Date	06/03/2020
Publication Type	INA
Application Number	202041008893
Application Filing Date	02/03/2020
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	COMPUTER SCIENCE
Classification (IPC)	G06K0009620000,G06N0003080000,G06T0007000000,G06K0009000000,G01N0021950000

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Abstract:

AR-Mining Technique : ADAPTIVE PSO BASED ASSOCIATION RULE MINING TECHNIQUE FOR SOFTWARE DEFECT CLASSIFICATION USING ANN ABSTRACT The Invention "AR-Mining Technique" categorizes various defects by using association rule mining dependent problem classification approach, which is applied to collect the actual defects using recognition. Association rule mining algorithm at times results in useless policies. To avoid this kind of concerns, the principles prior to classification determined by assistance as well as confidence value has to be optimized. In this exploration, Adaptive Particle Swarm (APSO) optimization algorithm is used. This Invention can discover the best assistance and confidence value to have the best policies. And finally Artificial Neural Network (ANN) can be used to classify the actual defects determined.

Complete Specification**Claims:WE CLAIMS**

1. The Invention "AR-Mining Technique" categorizes various defects by using association rule mining dependent problem classification approach, which is applied to collect the actual defects using recognition. Association rule mining algorithm at times results in useless policies. To avoid this kind of concerns, the principles prior to classification determined by assistance as well as confidence value has to be optimized. In this exploration, Adaptive Particle Swarm (APSO) optimization algorithm is used. This Invention can discover the best assistance and confidence value to have the best policies. And finally Artificial Neural Network (ANN) can be used to classify the actual defects determined. In a training system for a neural network, wherein the neural network has an input layer and an output layer, the training system training the neural network by performing a method comprising the steps of: initializing the neural network with one or more weights of random value; setting an adaptive learning rate to an initial value; storing an input layer training pattern and an output layer training pattern; processing the input layer training pattern in the neural network to obtain an output pattern; calculating an error between the output layer training pattern and the output pattern; if at least two output patterns have been obtained, calculating a new value for the adaptive learning rate, further comprising: calculating an error ratio to determine the change in error between training iterations; if the error ratio is less than a threshold value, multiplying the adaptive learning rate by a step-up factor; and if the error ratio is greater than the threshold value, multiplying the adaptive learning rate by a step-down factor; and if a final trained state is achieved, deploying the neural network, otherwise, repeating steps (d)-(f) for as many iterations as necessary to reach the final trained state.

2. According to claim 1# The invention is to further comprising the step of adjusting the values of the one or more weights based on the error calculated in step (e) and the value of the adaptive learning rate. The said step of adjusting the values of the one or more weights further comprises adjusting the value of the one or more weights such

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Page last updated on: 26/06/2019

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))	<u>(FOR OFFICE USE ONLY)</u> Application No: Filing Date Amount of Fees Paid: CBR NO: Signature:
1. APPLICANTS REFERENCE / IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)	

2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]

Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()

3A. APPLICANT(S):

Name	Country of Residence	Nationality	Address
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3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]

Natural Person (✓)	Other than Natural Person ()		
	Small Entity ()	Startup ()	Others ()

4. INVENTOR(S): [Please tick (✓) at the appropriate category]

Are all the inventor(s) same as the applicant(s) named above?	Yes (✓)	No ()
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If "No", furnish the details of the inventor(s) N.A

Name	Nationality	Country of Residence	Address
NA	NA	NA	NA

5. TITLE OF THE INVENTION:

AR-Mining Technique : ADAPTIVE PSO BASED ASSOCIATION RULE MINING TECHNIQUE FOR SOFTWARE DEFECT CLASSIFICATION USING ANN

6. AUTHORISED REGISTERED PATENT AGENT(S)		NA
ADDITIONAL PATENT AGENTS	NA	

7. ADDRESS FOR SERVICE OF APPLICANT/ PATENT AGENT(S) IN INDIA MRS. B DHANALAXMI Address: ASSISTANT PROFESSOR, DEPARTMENT OF INFORMATION TECHNOLOGY, INSTITUTE OF AERONAUTICAL ENGINEERING, HYDERABAD-500043, TELANGANA, INDIA. E-Mail: dinnu18@gmail.com	Mobile No.: 9866546280 Mo no: 7702215526 E-mail: dinnu18@gmail.com E-mail: dinnu18@outlook.com
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8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION: N.A

Country	Appln. Number	Filing Date	Name of the Applicant	Title of the Invention	IPC (as classified in the convention country)
NA	NA	NA	NA	NA	NA

9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT):

International application number	International filing date as allotted by the receiving office.
NA	NA

10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION : N.A

Original (first) application number	Date of filing of Original (first) application
N.A.	N.A.

11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT: N.A

Main application / patent Number	Date of filing of main application
N.A.	N.A.

12. DECLARATIONS:

(i) Declaration by the Inventor:

(In case the applicant is an assignee: the inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

We, the above named inventor are the true & first inventor for this invention and declare that the applicant herein is my assignee or legal representative:

NA

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

(In case the applicant in India is different than the applicant in the convention country: the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)

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

(iii) Declaration by the applicants:

We, the applicants hereby declare that: -

1. We are in possession of the above-mentioned invention.
2. The **Complete Specification** relating to the invention is filed with this application.
3. The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by us before the grant of patent to us: **N.A.**
4. There is no lawful ground of objection to the grant of the patent to me/ us.
5. We are the assignees or legal representatives of true and first inventors:
6. The application or each of the applications, particulars of which are given in Para – 8 was the first application in convention country/countries in respect of our invention: **N.A.**
7. We claim the priority from the above mentioned application filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by us or by any person from which we derive the title: **YES**
8. Our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Para-9: **N.A.**
9. The application is divided out of our application particulars of which is given in Para-10 and prays that this application may be treated as deemed to have been filed on N.A. Under sec.16 of the Act: **N.A.**
10. The said invention is an improvement in or modification of the invention particulars of which are given in Para-11 :**N.A.**

FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete specification) #	No. of pages:		
Claim(s)	No. of claims: No. of pages:		
Abstract	No. of pages:		
Drawing(s)	No. of drawings: No. of pages:		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

1. Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies) **N.A**
2. Sequence listing in electronic form **N.A**

3. Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies) N.A
4. Statement and Undertaking on Form-3
5. Declaration of Inventor ship on Form-5
6. Request For Publication Form9 , 2750.Rs
7. Form18 Examination Request, 4400.Rs
8. Power of Authority
9. Other Form 4 to 31 According to needed can fill.

Total fee Rs/- **in Cash/ Banker's Cheque /Bank Draft bearing No.....**

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

Dated : 2/3/2020

MRS. B DHANALAXMI
MR. N V KRISHNA RAO
MR.G SAI CHAITANYA KUMAR
MRS. MANUKONDA ASHOKA DEEPTHI
MRS. N M DEEPIKA
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To,
The Controller of Patent,
The Patent Office, at