पेटेंट कार्यालय
शासकीय जर्नल

OFFICIAL JOURNAL
OF
THE PATENT OFFICE

निर्गमन सं. 06/2024	शुक्रवार	दिनांक: 09/02/2024
ISSUE NO. 06/2024	FRIDAY	DATE: 09/02/2024

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :20/01/2024

(21) Application No.202441004150 A
(43) Publication Date : 09/02/2024

(54) Title of the invention : MACHINE LEARNING-ENHANCED TECHNIQUES FOR CONCEPT EXTRACTION FROM MATHEMATICAL PROBLEMS

(51) International classification	:G06N0020000000, G06N0003040000, G06N0003080000, G06K0009620000, G06N0005040000
(86) International Application No Filing Date	:NA :NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)CMR COLLEGE OF ENGINEERING & TECHNOLOGY
Address of Applicant :KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401. Hyderabad ---------- ----------
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Mr. M. PRASANNANJANEYULU
Address of Applicant :Assistant Professor Dept. of H&S (Mathematics) CMR COLLEGE OF ENGINEERING & TECHNOLOGY KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401 Hyderabad ---------- ----------
2)Dr. T. VIDYANATH
Address of Applicant :Assistant Professor Dept. of H&S (Mathematics) CMR COLLEGE OF ENGINEERING & TECHNOLOGY KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401 Hyderabad ---------- ----------
3)Mr. S. NARESH KUMAR
Address of Applicant :Assistant Professor Dept. of H&S (Mathematics) CMR COLLEGE OF ENGINEERING & TECHNOLOGY KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401 Hyderabad ---------- ----------
4)Ms. PRATAPA KAMALA
Address of Applicant :Assistant Professor Dept. of H&S (Mathematics) CMR COLLEGE OF ENGINEERING & TECHNOLOGY KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401 Hyderabad ---------- ----------
5)Mr. M. RAJKUMAR
Address of Applicant :Assistant Professor Dept. of H&S (Mathematics) CMR COLLEGE OF ENGINEERING & TECHNOLOGY KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401 Hyderabad ---------- ----------

(57) Abstract :
MACHINE LEARNING-ENHANCED TECHNIQUES FOR CONCEPT EXTRACTION FROM MATHEMATICAL PROBLEMS ABSTRACT
The invention relates to a system and method for concept extraction from mathematical problems using machine learning techniques. The system comprises a mathematical problem input module, a machine learning model, and a concept extraction engine. The machine learning model, trained on a dataset of mathematical problems and concept annotations, employs natural language processing and deep learning techniques to accurately identify and extract relevant concepts from electronic mathematical problems. The concept extraction engine generates a representation of the extracted concepts. The invention incorporates a feedback loop mechanism allowing users to provide feedback on the accuracy of concept extraction, facilitating continuous improvement through retraining the machine learning model. This innovation enhances the efficiency and precision of concept extraction from mathematical problems, offering a valuable tool for educators, researchers, and individuals engaging with mathematical content.

No. of Pages : 18 No. of Claims : 9