



**GUJARAT TECHNOLOGICAL UNIVERSITY  
(GTU)  
INNOVATION COUNCIL (GIC)  
Patent Search & Analysis Report  
(PSAR)**



**Date of Submission : 15/10/2020**

Dear Aghera Kishan Amrutlal,

Studied Patent Number for generation of PSAR : 20BE7\_170170107003\_5

### **PART 1: PATENT SEARCH DATABASE USED**

- |                                   |   |   |
|-----------------------------------|---|---|
| 1. Patent Search Database used    | : | Indian Patent Office database   |
| Web link of database              | : | <a href="http://ipindiaservices.gov.in/publicsearch/">http://ipindiaservices.gov.in/publicsearch/</a> |
| 2. Keywords Used for Search       | : | language learning, independent learning, chatbot  |
| 3. Search String Used             | : | language independent learning   |
| 4. Number of Results/Hits getting | : | 1910  |

### **PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA**

- |   |   |   |
|---|---|---|
| 5. Category/ Field of Invention               | : |   |
| 6. Invention is Related to/Class of Invention | : | Computer Science  |
| 6 (a) : IPC class of the studied patent       | : | G06F0017270000, G06N0003080000, G06N0005020000, G06F0017280000, G06N0003040000  |
| 7. Title of Invention                         | : | SYSTEM AND METHOD FOR LANGUAGE INDEPENDENT ITERATIVE LEARNING MECHANISM FOR NLP TASKS   |
| 8. Patent No.                                 | : |   |
| 9. Application Number                         | : | 201941006161  |
| 9 (a) : Web link of the studied patent        | : | <a href="http://ipindiaservices.gov.in/PublicSearch/PublicationSearch/PatentDetails">http://ipindiaservices.gov.in/PublicSearch/PublicationSearch/PatentDetails</a> |
| 10. Date of Filing/Application (DD/MM/YYYY)   | : | 02/15/2019  |
| 11. Priority Date (DD/MM/YYYY)                | : |   |
| 12. Publication/Journal Number                | : | 34/2020   |
| 13. Publication Date (DD/MM/YYYY)             | : | 08/21/2020  |
| 14. First Filled Country : Albania            | : | 100   |

**15. Also Published as**

Sr.No	Country Where Filled	Application No./Patent No.
1		

**16. Inventor/s Details.**

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	BALAJI JAGAN	INDIA
2	GOPICHAND AGNIHOTRAM	INDIA
3	MEENAKSHI SUNDARAM MURUGESHAN	INDIA

**17. Applicant/Assignee Details.**

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	WIPRO LIMITED	INDIA

**18. Applicant for Patent is** : Company

**PART 3: TECHNICAL PART OF PATENTED INVENTION****19. Limitation of Prior Technology / Art**

No limitation found as of now.

**20. Specific Problem Solved / Objective of Invention**

A method and system of language-independent iterative learning mechanism for Natural Language Processing (NLP) tasks are disclosed. The method includes identifying at least one NLP feature associated with a set of words within a sentence for an NLP task. The method includes creating a pattern associated with the sentence for the NLP task, based on the at least one NLP feature associated with the set of words and the linkage relationship between each subset of two adjacent words. The method further includes computing a confidence score corresponding to the pattern, based on comparison within a trained dataset. The method further includes assigning a pattern category to the pattern, based on the confidence score and a predefined threshold score. The method further includes executing the NLP task based on the assigned pattern category.

**21. Brief about Invention**

A method and system of language-independent iterative learning mechanism for Natural Language Processing (NLP) tasks are disclosed. The method includes identifying at least one NLP feature associated with a set of words within a sentence for an NLP task. The method includes creating a pattern associated with the sentence for the NLP task, based on the at least one NLP feature associated with the set of words and the linkage relationship between each subset of two adjacent words. The method further includes computing a confidence score corresponding to the pattern, based on comparison within a trained dataset. The method further includes assigning a pattern category to the pattern, based on the confidence score and a predefined threshold score. The method further includes executing the NLP task based on the assigned pattern category.

**22. Key learning Points**

language-independent iterative learning through NLP tasks.

**23. Summary of Invention**

A method and system of language-independent iterative learning mechanism for Natural Language Processing (NLP) tasks are disclosed. The method includes identifying at least one NLP feature associated with a set of words within a sentence for an NLP task. The method includes creating a pattern associated with the sentence for the NLP task, based on the at least one NLP feature associated with the set of words and the linkage relationship between each subset of two adjacent words. The method further includes computing a confidence score corresponding to the pattern, based on comparison within a trained dataset. The method further includes assigning a pattern category to the pattern, based on the confidence score and a predefined threshold score. The method further includes executing the NLP task based on the assigned pattern category.

**24. Number of Claims** : 10

**25. Patent Status**

:

Published Application

**26. How much this invention is related with your IDP/UDP?**

71 to 90%

**27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)**

No improvement as of now.