पेटेंट कार्यालय
शासकीय जर्नल

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PUBLICATION OF THE PATENT OFFICE

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(57) Abstract :
The invention presents a data-driven consumer behaviour analysis system that utilizes AI, ML, and big data technologies to revolutionize marketing strategies. By integrating structured and unstructured data from diverse sources, the system provides real-time analytics, predictive modeling, and actionable insights to enable highly personalized campaigns. Advanced data aggregation techniques ensure data accuracy, while robust security measures maintain compliance with privacy regulations. Intuitive visualization tools and dashboards simplify analytics interpretation, empowering businesses to make agile decisions. The system fosters consumer trust, enhances engagement, and optimizes resource allocation, setting a new standard for marketing effectiveness in the digital age.

No. of Pages : 18 No. of Claims : 10

FORM 2

THE PATENTS ACT, 1970

(39 of 1970)

&

The Patent Rules, 2003

COMPLETE SPECIFICATION

(See section 10 and rule 13)

TITLE OF THE INVENTION

"Data-Driven Consumer Behavior Analysis System for Strategic Marketing Campaigns"

Applicant(s)

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The following specification particularly describes the nature of the invention and the manner in which it is performed:

Field of Invention:

The present invention relates to the field of data-driven marketing, consumer behaviour analytics, and artificial intelligence. It specifically focuses on systems and methodologies for collecting, processing, and analyzing consumer data to identify trends, preferences, and purchasing behaviours. The invention integrates machine learning algorithms, big data technologies, and predictive analytics to support the design and execution of strategic marketing campaigns. It addresses challenges in personalizing marketing strategies by leveraging real-time and historical consumer data to enhance decision-making. The system is applicable across industries, including retail, e-commerce, telecommunications, and financial services, where customer engagement and retention are critical. Furthermore, it enables businesses to optimize resource allocation, maximize ROI, and improve customer satisfaction through targeted and efficient marketing initiatives. By bridging the gap between raw data and actionable insights, the invention advances the precision and effectiveness of modern marketing efforts.

Background of the invention:

In the modern era, businesses operate in a highly competitive and dynamic environment where understanding consumer behaviour has become a cornerstone for success. The evolution of technology, coupled with the exponential growth of data generated through various channels, has transformed the way organizations approach

marketing strategies. Consumers interact with brands through multiple touchpoints, including social media, websites, mobile applications, and physical stores, generating vast amounts of data that hold valuable insights into their preferences, needs, and buying patterns. However, despite the abundance of data, businesses face significant challenges in effectively harnessing this information to drive actionable insights and inform strategic marketing campaigns.

Traditional marketing approaches, which often rely on intuition and static demographic information, are no longer sufficient in an age where personalization and real-time engagement are paramount. Consumers today expect tailored experiences that resonate with their unique preferences and behaviours. This shift has necessitated a transition from broad-based marketing strategies to more targeted, data-driven approaches. However, the process of collecting, analyzing, and applying consumer data to achieve these objectives remains complex and resource-intensive. Organizations grapple with issues such as data silos, lack of integration between platforms, and the inability to process unstructured data effectively. These challenges impede their ability to deliver personalized and impactful marketing campaigns that align with consumer expectations.

The advent of artificial intelligence (AI), machine learning (ML), and big data technologies has created new opportunities for addressing these challenges. These advanced tools enable businesses to process and analyze vast datasets with

unprecedented speed and accuracy, uncovering patterns and trends that were previously difficult to discern. By leveraging predictive analytics, organizations can anticipate consumer needs, identify emerging market trends, and optimize their marketing strategies accordingly. Despite these advancements, many businesses struggle to implement these technologies effectively due to a lack of expertise, fragmented data ecosystems, and the complexities involved in integrating AI and ML solutions into existing workflows.

Moreover, consumer behaviour is influenced by a multitude of factors, including cultural, psychological, economic, and situational elements. Capturing and analyzing these variables requires sophisticated systems capable of aggregating data from diverse sources and applying advanced analytics to generate actionable insights. For instance, a consumer’s online browsing history, social media interactions, past purchase behaviour, and real-time location data can all provide valuable information about their preferences and intent. However, without a unified and efficient system to process this information, businesses risk missing critical opportunities to engage with their audience effectively.

Another pressing challenge lies in maintaining consumer trust and adhering to data privacy regulations. As businesses collect and analyze consumer data, they must ensure compliance with laws such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA). Transparency, data security, and

ethical practices are essential for fostering trust and ensuring that consumers feel confident in sharing their information. Failure to address these concerns can lead to reputational damage, legal penalties, and loss of customer loyalty.

Recognizing these challenges, the proposed invention aims to revolutionize the field of marketing by providing a comprehensive, data-driven consumer behaviour analysis system. This system leverages cutting-edge technologies such as AI, ML, and big data analytics to collect, process, and analyze consumer data from various sources. By integrating structured and unstructured data, the system provides a holistic view of consumer behaviour, enabling businesses to design highly personalized and effective marketing campaigns. The proposed system addresses the limitations of traditional approaches by offering real-time analytics, predictive modeling, and automated insights generation, empowering organizations to make data-driven decisions with confidence.

The invention’s architecture is designed to overcome common data integration challenges by employing advanced data aggregation techniques and ensuring seamless interoperability between different platforms and data sources. It incorporates robust data preprocessing mechanisms to clean, transform, and standardize raw data, ensuring accuracy and reliability in the analytics process. Furthermore, the system utilizes machine learning algorithms to identify patterns, segment consumers based on their behaviours, and predict future trends with high precision. This enables

businesses to allocate resources more efficiently, target the right audience, and deliver messages that resonate on a personal level.

In addition to its analytical capabilities, the proposed system prioritizes data security and privacy compliance. It includes features such as data encryption, access controls, and audit trails to protect sensitive information and ensure transparency in data usage. By adhering to regulatory requirements and promoting ethical practices, the system helps businesses build and maintain consumer trust, which is critical for long-term success.

The proposed invention also incorporates intuitive visualization tools and dashboards that present complex analytics in a user-friendly format. These tools enable marketers to quickly interpret data, track campaign performance, and identify areas for improvement. By providing actionable insights in real time, the system facilitates agile decision-making and helps businesses stay ahead in a rapidly changing market landscape.

Overall, the proposed data-driven consumer behaviour analysis system represents a significant advancement in the field of strategic marketing. By addressing the challenges associated with data collection, integration, analysis, and privacy, the invention empowers businesses to unlock the full potential of their data assets. It enables them to connect with consumers on a deeper level, delivering personalized experiences that drive engagement, loyalty, and growth. In doing so, the invention not

only enhances the effectiveness of marketing campaigns but also sets a new standard for how businesses approach consumer behaviour analysis in the digital age.

Summary of the invention:

The proposed invention is a data-driven consumer behaviour analysis system designed to revolutionize strategic marketing by leveraging advanced technologies such as artificial intelligence (AI), machine learning (ML), and big data analytics. It addresses the challenges businesses face in collecting, integrating, and analyzing vast amounts of consumer data from diverse sources, including social media, mobile applications, and physical stores. By providing a unified platform, the system enables businesses to generate actionable insights, identify trends, and deliver highly personalized marketing campaigns in real time. It incorporates robust data preprocessing mechanisms to ensure accuracy and employs predictive analytics to forecast consumer behaviour and market trends. The system also prioritizes data privacy and compliance with regulations like GDPR and CCPA, incorporating features such as encryption and access controls to foster consumer trust. With intuitive visualization tools, it simplifies the interpretation of complex analytics, empowering marketers to make agile, informed decisions. Overall, the invention enhances marketing efficiency, optimizes resource allocation, and helps businesses create deeper, more meaningful connections with their audience while setting new standards for consumer behaviour analysis.

Brief description of the proposed invention:

The proposed invention is a comprehensive system designed to transform how businesses analyze consumer behaviour and execute strategic marketing campaigns. In today's dynamic and competitive market, understanding consumer preferences, needs, and behaviours has become a critical factor for success. This invention leverages cutting-edge technologies such as artificial intelligence (AI), machine learning (ML), and big data analytics to bridge the gap between raw consumer data and actionable insights. It addresses the significant challenges businesses face in collecting, processing, and utilizing data effectively, providing an innovative solution that integrates structured and unstructured data from various sources into a unified platform.

Consumers engage with brands through multiple channels, including social media, websites, mobile applications, and physical stores, generating vast amounts of data. However, traditional marketing approaches that rely on intuition or static demographic information are insufficient in today's environment where personalization and real-time engagement are paramount. This invention overcomes the limitations of these traditional methods by employing advanced data aggregation and processing techniques to provide a holistic view of consumer behaviour. By analyzing online interactions, purchase history, browsing patterns, and real-time location data, the

system enables businesses to understand their customers on a deeper level and anticipate their needs.

The invention’s architecture is specifically designed to address common challenges in data integration and analysis. It employs advanced data preprocessing mechanisms to clean, transform, and standardize raw data, ensuring accuracy and reliability in the insights generated. Additionally, it incorporates machine learning algorithms capable of identifying patterns and trends within vast datasets, segmenting consumers based on their behaviour, and predicting future preferences with high precision. These capabilities empower businesses to allocate resources more efficiently, target the right audience, and design highly personalized marketing messages that resonate on an individual level.

A key feature of the proposed system is its ability to generate real-time analytics and predictive modeling. By processing data as it is generated, the system enables businesses to respond promptly to emerging market trends and consumer needs. This agility is critical in a rapidly changing market landscape, where delays in decision-making can result in missed opportunities. The system’s predictive capabilities further enhance its utility by allowing organizations to anticipate consumer behaviour and adapt their strategies proactively. This not only improves the effectiveness of marketing campaigns but also helps businesses maintain a competitive edge.

Another critical aspect of the invention is its emphasis on data privacy and security. As businesses collect and analyze increasing amounts of consumer data, ensuring compliance with data protection regulations such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) is essential. The system includes robust security features such as encryption, access controls, and audit trails to safeguard sensitive information and promote transparency in data usage. By adhering to ethical practices and regulatory requirements, the invention fosters consumer trust, which is crucial for long-term business success.

The system also incorporates user-friendly visualization tools and dashboards that simplify the interpretation of complex analytics. These tools allow marketers to monitor campaign performance, track key metrics, and identify areas for improvement with ease. By presenting data in an intuitive format, the system reduces the cognitive load on users and facilitates more informed decision-making. This accessibility ensures that businesses of all sizes and industries can leverage the system’s capabilities to enhance their marketing strategies.

Overall, the proposed invention represents a significant advancement in the field of consumer behaviour analysis and strategic marketing. It addresses the challenges of data collection, integration, analysis, and privacy while providing businesses with the tools they need to connect with their audience in meaningful ways. By enabling highly personalized and impactful marketing campaigns, the system helps businesses drive

engagement, loyalty, and growth. In doing so, it not only enhances the effectiveness of marketing efforts but also sets a new standard for how organizations approach consumer behaviour analysis in the digital age.

We Claims:

1. A data-driven consumer behaviour analysis system leveraging artificial intelligence (AI) and machine learning (ML) to collect and process structured and unstructured consumer data from multiple sources.
2. The system of claim 1, wherein advanced data aggregation and preprocessing techniques are utilized to clean, transform, and standardize raw data, ensuring accuracy and reliability.
3. The system of claims 1 and 2, further comprising predictive analytics capabilities to anticipate consumer behaviour and emerging market trends with high precision.
4. A method for segmenting consumers based on behavioural patterns, leveraging machine learning algorithms to enable targeted marketing campaigns, as in claim 3.
5. The system of claim 4, incorporating real-time data processing to allow businesses to respond promptly to consumer needs and market dynamics.
6. A robust security framework in the system, as described in claims 1 and 2, ensuring compliance with data protection regulations such as GDPR and CCPA.
7. The system of claims 1 and 6, wherein data encryption, access controls, and audit trails are implemented to safeguard sensitive consumer information.
8. A user-friendly visualization tool integrated into the system of claim 1, presenting complex analytics in an intuitive format for marketers to interpret data and track performance metrics.

9. The system of claim 8, wherein automated insights and real-time dashboards facilitate agile decision-making and campaign optimization.

10. A comprehensive solution combining all features of claims 1 through 9, enabling businesses to design and execute highly personalized and impactful marketing campaigns.

Dated this 31st day of December 2024

Signature: 

Applicant(s)

Dr. Padmavathy. G et. al.

ABSTRACT

Data-Driven Consumer Behavior Analysis System for Strategic Marketing Campaigns

The invention presents a data-driven consumer behaviour analysis system that utilizes AI, ML, and big data technologies to revolutionize marketing strategies. By integrating structured and unstructured data from diverse sources, the system provides real-time analytics, predictive modeling, and actionable insights to enable highly personalized campaigns. Advanced data aggregation techniques ensure data accuracy, while robust security measures maintain compliance with privacy regulations. Intuitive visualization tools and dashboards simplify analytics interpretation, empowering businesses to make agile decisions. The system fosters consumer trust, enhances engagement, and optimizes resource allocation, setting a new standard for marketing effectiveness in the digital age.

Dated this 31st day of December 2024

Signature: 

Applicant(s)

Dr. Padmavathy. G et. al.

FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 **APPLICATION FOR GRANT OF PATENT** (See section 7, 54 and 135 and sub-rule (1) of rule 20)	(FOR OFFICE USE ONLY)

	Application No.	
	Filing date:	
	Amount of Fee paid:	
	CBR No:	
	Signature:	

1. APPLICANT'S 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 in Full	Nationality	Country of Residence	Address of the Applicant
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3. Dr. Anu C Haridasan	Indian	India	Assistant Professor, MCC Boyd Tandon School of Business, Madras Christian College, Tambaram, Chennai, Tamil Nadu, PIN: 600059
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5. Dr. Vikram Gourishankar Kamble	Indian	India	Mig 1st, House No-8, Adarsh Nagar, Vijayapura, Karnataka-586403
6. Dr. B. R. Kumar	Indian	India	Professor, Department of MBA Andhra Loyola College. Vijayawada, Andhra Pradesh, India- 520008
7. Dr. A. Buckshumiyan	Indian	India	Associate Professor, Department of Mechanical Engineering, New Prince Shri Bhavani College of Engineering & Technology, Vengaivasal Main Road, Valli Nagar, Sembakkam, Chennai, Tamil Nadu-600073

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 ()

If "No", furnish the details of the inventor(s)

Name in Full	Nationality	Country of Residence	Address of the Inventor
Same as Applicant			

5. TITLE OF THE INVENTION

"Data-Driven Consumer Behavior Analysis System for Strategic Marketing Campaigns"

6. AUTHORISED REGISTERED PATENT AGENT(S)	IN/PA No.	
	Name	
	Mobile No.	
7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA	Name	Dr. Padmavathy. G
	Postal Address	Assistant Professor, Department of BBA, Faculty of Management, SRM Institute of Science and Technology, Vadapalani Campus, Chennai, Tamil Nadu, PIN: 600026
	Telephone No.	
	Mobile No.	9442547353
	Fax No.	
	E-mail ID	mail2patentipr@gmail.com

8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION

Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)

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

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

Original (first) application No.	Date of filing of original (first) application

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

Main application/patent No.	Date of filing of main application

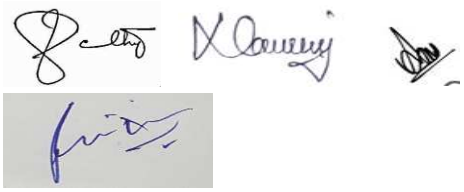
12. DECLARATIONS

(i) Declaration by the inventor(s)

(**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).

I/We, the above named inventor(s) 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: 31/12/2024

(b) Name	(c) Signature
1. Dr. Padmavathy. G 2. Dr. X. Naveenraj 3. Dr. Anu C Haridasan 4. Dr. S. Balasenthil, 5. Dr. Vikram Gourishankar Kamble 6. Dr. B. R. Kumar 7. Dr. A. Buckshumiyan	

(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.

(a) Date

(b) Signature(s)

(c) Name(s) of the signatory

(iii) Declaration by the applicant(s)

I/We the applicant(s) hereby declare(s) that: -

- I am/ We are in possession of the above-mentioned invention.
- The provisional/complete specification relating to the invention is filed with this application.
- 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 me/us before the grant of patent to me/us.
- There is no lawful ground of objection(s) to the grant of the Patent to me/us.
- I am/we are the true & first inventor(s).
- I am/we are the assignee or legal representative of true & first inventor(s).
- The application or each of the applications, particulars of which are given in Paragraph-8, was the first application in convention country/countries in respect of my/our invention(s).
- I/We claim the priority from the above mentioned application(s) 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 me/us or by any person from which I/We derive the title.
- My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph-9.
- The application is divided out of my /our application particulars of which is given inParagraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act.
- The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph-11.

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete/ Provisional specification) #	No. of pages: 15		

No. of Claim(s)	No. of claims: 10 No. of pages: 02		
Abstract	No. of pages: 01		
No. of Drawing(s)	No. of drawings: 00 No. of pages: 00		

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.

(b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(c) Sequence listing in electronic form

(d) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(e) Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.

(f) Translation of priority document/Specification/International Search Report/International Preliminary Report on Patentability.

(g) Statement and Undertaking on Form 3

(h) Declaration of Inventorship on Form 5

(i)Power of Authority

(j)**Total fee ₹…….in Cash/ Banker's Cheque /Bank Draft bearing No.....**
Date on ……. Bank.

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

Dated this 31st day of December 2024

Signature: 

Applicant(s): Dr. Padmavathy. G et. al.

To,

The Controller of Patents
The Patent Office, at Chennai

Note: -

* Repeat boxes in case of more than one entry.

* To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
* Tick ()/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
* Name of the inventor and applicant should be given in full, family name in the beginning.
* Strike out the portion which is/are not applicable.
* For fee: See First Schedule";

FORM 3

THE PATENTS ACT,
1970 (39 of 1970)
and
THE PATENTS RULES, 2003

STATEMENT AND UNDERTAKING UNDER SECTION 8

(See section 8; Rule 12)

1. Name of the applicant(s).	I/We, Dr. Padmavathy. G et. al., all are citizen of India, Address of one of the Applicant: Assistant Professor, Department of BBA, Faculty of Management, SRM Institute of Science and Technology, Vadapalani Campus, Chennai, Tamil Nadu, PIN: 600026.
2. Name, address and nationality of the joint applicant.	(i) that I/We have not made any application for the same/substantially the same invention outside India Or (ii) ~~that I/We who have made this application No… dated alone/jointly with……; made for the same/ substantially same invention, application(s) for patent in the other countries, the particulars of which are given below:~~

Name of the Country	Date of Application	Application No.	Status of the Application	Date of Publication	Date of grant
-	-	-	-	-	-

3. Name and address of the assignee	(iii) that the rights in the application(s) has/have been assigned to …… none …… …… …… that I/We undertake that upto the date of grant of the patent by the Controller, I/We would keep him informed in writingthe details regarding corresponding applications for patents filed outside India within six monthsfrom the date of filing of such application. **Dated this 31st day of December 2024**

4. To be signed by the applicant or his authorized registered patent agent.	**Signature:** 
5. Name of the natural person who has signed.	Dr. Padmavathy. G et. al. **Name of the Applicant(s)**
	To The Controller of Patents, The Patent Office, at Chennai
Note.- Strike out whichever is not applicable;	

FORM- 5

THE PATENTS ACT, 1970
(39 of 1970)
&
The Patents Rules, 2003

DECLARATION AS TO INVENTORSHIP
[See Section 10(6) and Rule 13(6)]

1. NAME OF THE APPLICANT(S)

I/We, Dr. Padmavathy. G et. al., all are citizen of India, Address of one of the Applicant: Assistant Professor, Department of BBA, Faculty of Management, SRM Institute of Science and Technology, Vadapalani Campus, Chennai, Tamil Nadu, PIN: 600026.

hereby declare that the true and first inventor(s) of the invention disclosed in the complete specification filed in pursuance of ~~my~~ / our application numbered _____ dated 31-12-2024 ~~is~~/are

2. INVENTOR(S)

(a) NAME	**(b) NATIONALITY**	**(c) ADDRESS**
1. Dr. Padmavathy. G	Indian	Assistant Professor, Department of BBA, Faculty of Management, SRM Institute of Science and Technology, Vadapalani Campus, Chennai, Tamil Nadu, PIN: 600026
2. Dr. X. Naveenraj	Indian	Assistant Professor, Faculty of Management, SRM Institute of Science and Technology, Vadapalani Campus, Chennai, Tamil Nadu, PIN: 600026
3. Dr. Anu C Haridasan	Indian	Assistant Professor, MCC Boyd Tandon School of Business, Madras Christian College, Tambaram, Chennai, Tamil Nadu, PIN: 600059
4. Dr. S. Balasenthil	Indian	Associate Professor, K. L. N. College of Engineering, Sivagangai District, Tamil Nadu - 630612
5. Dr. Vikram Gourishankar Kamble	Indian	Mig 1st, House No-8, Adarsh Nagar, Vijayapura, Karnataka-586403
6. Dr. B. R. Kumar	Indian	Professor, Department of MBA

		Andhra Loyola College. Vijayawada, Andhra Pradesh, India- 520008
7. Dr. A. Buckshumiyan	Indian	Associate Professor, Department of Mechanical Engineering, New Prince Shri Bhavani College of Engineering & Technology, Vengaivasal Main Road, Valli Nagar, Sembakkam, Chennai, Tamil Nadu-600073

~~3. DECLARATION TO BE GIVEN WHEN THE APPLICATION IN INDIA IS FILED BY THE APPLICANT(S) IN THE CONVENTION COUNTRY: -~~

N.A.

~~We the applicant(s) in the convention country hereby declare that our right to apply for a patent in India is by way of assignment from the true and first inventor(s).~~

Dated this 31st day of December 2024

Dr. Padmavathy. G et. al.

Applicant(s)

To,
The Controller of Patents
The Patent Office, Chennai

FORM- 5

THE PATENTS ACT, 1970
(39 of 1970)
&
The Patents Rules, 2003

DECLARATION AS TO INVENTORSHIP
[See Section 10(6) and Rule 13(6)]

1. NAME OF THE APPLICANT(S)

I/We, Dr. Padmavathy. G et. al., all are citizen of India, Address of one of the Applicant: Assistant Professor, Department of BBA, Faculty of Management, SRM Institute of Science and Technology, Vadapalani Campus, Chennai, Tamil Nadu, PIN: 600026.

hereby declare that the true and first inventor(s) of the invention disclosed in the complete specification filed in pursuance of ~~my~~ / our application numbered _____ dated 31-12-2024 ~~is~~/are

2. INVENTOR(S)

(a) NAME	**(b) NATIONALITY**	**(c) ADDRESS**
1. Dr. Padmavathy. G	Indian	Assistant Professor, Department of BBA, Faculty of Management, SRM Institute of Science and Technology, Vadapalani Campus, Chennai, Tamil Nadu, PIN: 600026
2. Dr. X. Naveenraj	Indian	Assistant Professor, Faculty of Management, SRM Institute of Science and Technology, Vadapalani Campus, Chennai, Tamil Nadu, PIN: 600026
3. Dr. Anu C Haridasan	Indian	Assistant Professor, MCC Boyd Tandon School of Business, Madras Christian College, Tambaram, Chennai, Tamil Nadu, PIN: 600059
4. Dr. S. Balasenthil	Indian	Associate Professor, K. L. N. College of Engineering, Sivagangai District, Tamil Nadu - 630612
5. Dr. Vikram Gourishankar Kamble	Indian	Mig 1st, House No-8, Adarsh Nagar, Vijayapura, Karnataka-586403
6. Dr. B. R. Kumar	Indian	Professor, Department of MBA

		Andhra Loyola College. Vijayawada, Andhra Pradesh, India- 520008
7. Dr. A. Buckshumiyan	Indian	Associate Professor, Department of Mechanical Engineering, New Prince Shri Bhavani College of Engineering & Technology, Vengaivasal Main Road, Valli Nagar, Sembakkam, Chennai, Tamil Nadu-600073

~~3. DECLARATION TO BE GIVEN WHEN THE APPLICATION IN INDIA IS FILED BY THE APPLICANT(S) IN THE CONVENTION COUNTRY: -~~

N.A.

~~We the applicant(s) in the convention country hereby declare that our right to apply for a patent in India is by way of assignment from the true and first inventor(s).~~

Dated this 31st day of December 2024

Dr. Padmavathy. G et. al.

Applicant(s)

To,
The Controller of Patents
The Patent Office, Chennai

FORM 9

THE PATENT ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003

REQUEST FOR PUBLICATION

[See section 11A (2) rule 24A]

I/We **Dr. Padmavathy. G,Dr. X. Naveenraj,Dr. Anu C Haridasan,Dr. S. Balasenthil,Dr. Vikram Gourishankar Kamble,Dr. B. R. Kumar,Dr. A. Buckshumiyan** hereby request for early publication of my/our [Patent Application No.] TEMP/E-1/121530/2024-CHE

Dated **31/12/2024 00:00:00** under section 11A(2) of the Act.

Dated this(Final Payment Date):----------
Signature
Name of the signatory

To,
The Controller of Patents,
The Patent Office,
At Chennai

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