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पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(54) Title of the invention : AI-OPTIMIZED PORTABLE SOLAR AND RENEWABLE ENERGY EV CHARGER

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(57) Abstract :
 [027] This invention presents an AI-Optimized Portable Solar and Renewable Energy EV Charger. The present invention comprising of detecting the rapid energy generation from solar and renewable energy sources. Assessing the energy demands of an electric vehicle in conjunction with the accessible energy resources and employing artificial intelligence to modify the charging settings of the EV charger for the purpose of enhancing the utilization of renewable energy sources and the efficient charging of the electric vehicle. The present invention further encompasses the integration of user preferences, data from the electricity grid, and weather-related forecasts into the artificial intelligence interface to facilitate real-time charging determinations. Accompanied Drawing [FIG. 1-2]

No. of Pages : 17 No. of Claims : 7

“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	
Brainware University, Kolkata		Indian	India	398, Ramkrishnapur Rd, Near Jagadighata Market, Barasat, Kolkata, West Bengal 700125	
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	
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5. TITLE OF THE INVENTION			
"AI-OPTIMIZED PORTABLE SOLAR AND RENEWABLE ENERGY EV CHARGER"			
6. AUTHORISED REGISTERED PATENT AGENT(S)		IN/PA No.	
		Name	
		Mobile No.	
		Name	Mahua Pal


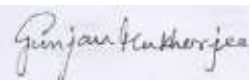
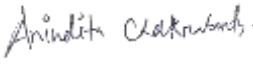





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8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN- CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION						
Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention 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 19/10/2023

(b) Name	(c) Signature
1. Mr. Suvojit Mukhopadhyay	
2. Dr. Gunjan Mukherjee	
3. Ms. Anindita Chakraborty	
4. Dr. Jayanta Aich	
5. Dr. Mahamuda Sultana	
6. Dr. Suman Bhattacharya	
7. Dr. Debasree Saha	
8. Mrs. Shikha Biswas	

(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 in Paragraph-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

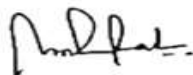
Item	Details	Fee	Remarks
Complete/ Provisional specification) #	No. of pages: 13		
No. of Claim(s)	No. of claims: 07 No. of pages: 02		
Abstract	No. of pages: 01		
No. of Drawing(s)	No. of drawings: 02 No. of pages: 01		

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 19th day of October 2023



**Registrar
Brainware University
Bansat, Kolkata- 700125**

Signature:

Name: Mahua Pal

Applicant: Brainware University, Kolkata

To,
The Controller of Patents
The Patent Office, at Kolkata

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 2

THE PATENTS ACT, 1970

(39 of 1970)

&

The Patent Rules, 2003

COMPLETE SPECIFICATION

(See section 10 and rule 13)

TITLE OF THE INVENTION

AI-OPTIMIZED PORTABLE SOLAR AND RENEWABLE ENERGY EV CHARGER

Applicant:

Brainware University, Kolkata,

398, Ramkrishnapur Rd, Near Jagadighata Market, Barasat, Kolkata, West

Bengal 700125.

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

FIELD OF THE INVENTION

[001] The invention, in general, relates to the technology field of energy generation and artificial intelligence. More specifically, the present invention relates to an AI-Optimized Portable Solar and Renewable Energy EV
5 Charger.

BACKGROUND OF THE INVENTION

[002] The following description provides the information that may be useful in understanding the present invention. It is not an admission that any of the information provided herein is prior art or relevant to the presently claimed
10 invention, or that any publication specifically or implicitly referenced is prior art.

[003] As the world confronts the challenges of climate change and the depletion of fossil fuel resources, the transition to electric vehicles (EVs) powered by renewable energy sources has gained paramount importance.
15 The convergence of renewable energy, electric vehicles, and advanced artificial intelligence (AI) technologies has led to innovative solutions that are shaping the future of transportation and sustainable energy.

[004] Conventionally, the automotive industry is witnessing a transformative shift from internal combustion engine (ICE) vehicles to electric vehicles. EVs
20 offer a cleaner and more sustainable mode of transportation, reducing greenhouse gas emissions and dependence on fossil fuels in compared to traditional systems. However, the widespread adoption of EVs has necessitated the development of efficient and eco-friendly charging infrastructure.

5 [005] Accordingly, on the basis of aforesaid facts, there remains a need in the prior art to provide an AI-Optimized Portable Solar and Renewable Energy EV Charger. Therefore, it would be useful and desirable to have a system, method, composition, and procedure to meet the above-mentioned needs.

SUMMARY OF THE PRESENT INVENTION

10 [006] In view of the foregoing disadvantages inherent in the known types of conventional methods and techniques, are now present in the prior art, the present invention provides an AI-Optimized Portable Solar and Renewable Energy EV Charger, which has all the advantages of the prior art and none of the disadvantages.

15 [007] In one aspect of the present invention, the disclosed invention pertains to the integration of renewable energy sources, such as solar and wind power, into the energy grid has gained momentum. Solar panels and wind turbines have become increasingly prevalent, generating clean electricity. These renewable resources offer a promising solution for reducing the carbon footprint of EV charging.

20 [008] Artificial intelligence plays a key role in optimizing the utilization of renewable energy in various sectors. In the context of EV charging, AI can enhance the efficiency and sustainability of the charging process. AI algorithms have the capability to analyse real-time data, predict energy generation, and adapt charging parameters to maximize the use of renewable energy sources.

[009] The AI-Optimized Portable Solar and Renewable Energy EV Charger represents a pioneering innovation at the intersection of electric mobility, renewable energy, and artificial intelligence. This portable EV charger is designed to harness the power of the sun and other renewable energy sources for charging electric vehicles. It offers a solution that aligns with the goals of reducing carbon emissions, minimizing the reliance on fossil fuels, and promoting clean energy integration in the automotive sector. This innovation represents a crucial step towards a more environmentally responsible and efficient transportation ecosystem.

[010] In this respect, before explaining at least one object of the invention in detail, it is to be understood that the invention is not limited in its application to the details of set of rules and to the arrangements of the various models set forth in the following description or illustrated in the drawings. The invention is capable of other objects and of being practiced and carried out in various ways, according to the need of that industry. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[011] These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[012] The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

[013] **FIG. 1**, demonstrates a flow diagram of an AI-Optimized Portable Solar and Renewable Energy EV Charger, in accordance with an embodiment of the present invention.

[014] **FIG. 2**, illustrates a schematic representation of an AI-Optimized Portable Solar and Renewable Energy EV Charger, in accordance with an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[015] While the present invention is described herein by way of example using embodiments and illustrative drawings, those skilled in the art will recognize that the invention is not limited to the embodiments of drawing or drawings described and are not intended to represent the scale of the various components. Further, some components that may form a part of the invention may not be illustrated in certain figures, for ease of illustration, and such omissions do not limit the embodiments outlined in any way. It should be understood that the drawings and detailed description thereto are not intended to limit the invention to the particular form disclosed, but on the contrary, the invention is to cover all modifications, equivalents, and alternatives falling within the scope of the present invention as defined by the appended claims. As used throughout this description, the word "may" is

used in a permissive sense (i.e. meaning having the potential to), rather than the mandatory sense, (i.e. meaning must). Further, the words "a" or "an" mean "at least one" and the word "plurality" means "one or more" unless otherwise mentioned. Furthermore, the terminology and phraseology used herein is solely used for descriptive purposes and should not be construed as limiting in scope. Language such as "including," "comprising," "having," "containing," or "involving," and variations thereof, is intended to be broad and encompass the subject matter listed thereafter, equivalents, and additional subject matter not recited, and is not intended to exclude other additives, components, integers or steps. Likewise, the term "comprising" is considered synonymous with the terms "including" or "containing" for applicable legal purposes. Any discussion of documents, acts, materials, devices, articles and the like is included in the specification solely for the purpose of providing a context for the present invention. It is not suggested or represented that any or all of these matters form part of the prior art base or are common general knowledge in the field relevant to the present invention.

[016] In this disclosure, whenever a composition or an element or a group of elements is preceded with the transitional phrase "comprising", it is understood that we also contemplate the same composition, element or group of elements with transitional phrases "consisting of", "consisting", "selected from the group of consisting of", "including", or "is" preceding the recitation of the composition, element or group of elements and vice versa.

[017] The present invention is described hereinafter by various embodiments with reference to the accompanying drawings, wherein reference numerals

used in the accompanying drawing correspond to the like elements throughout the description. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiment set forth herein. Rather, the embodiment is provided so that this disclosure will be thorough and complete and will fully convey the scope of the invention to those skilled in the art. In the following detailed description, numeric values and ranges are provided for various aspects of the implementations described. These values and ranges are to be treated as examples only and are not intended to limit the scope of the claims. In addition, a number of materials are identified as suitable for various facets of the implementations. These materials are to be treated as exemplary and are not intended to limit the scope of the invention.

[018] In present invention, the system and method disclosed herein pertain to the innovation that represents the sustainable transportation and energy management. It harmoniously combines portable charging, renewable energy integration, AI optimization, and user-centric design to provide an eco-friendly and efficient solution for EV charging. This innovation reduces carbon emissions, minimize the dependence on traditional energy sources, and promote clean energy integration in the automotive sector.

[019] The present invention pertains to an AI-Optimized Portable Solar and Renewable Energy EV Charger as disclosed in figure.1, the present invention comprising of a portable EV charger with solar panels and connections to renewable energy sources, a plurality of sensors for monitoring the real-time energy production from solar and renewable energy sources, an artificial intelligence module for analysing energy requirements,

user preferences, grid data, and weather forecasts, and a Control mechanism for adjusting the charging parameters of the EV charger to optimize the use of renewable energy sources and efficiently charge the electric vehicle. The present invention further comprises a user interface for configuring charging preferences and receiving real-time charging status updates. A communication module for connecting with the electricity grid and other energy sources and a weather monitoring system is implemented for predicting energy production from solar panels and renewable sources.

[020] In accordance with an embodiment for the present invention, a portable charging unit equipped with advanced functionalities that allow for flexible and on-the-go electric vehicle (EV) charging. The charger's portability makes it an ideal solution for a wide array of applications, from residential and commercial settings to outdoor and remote locations. Renewable Energy Integration incorporates solar panels and connections to various renewable energy sources. This enables the direct utilization of clean and sustainable energy for EV charging. The charger is equipped to harness solar power and other renewable sources, reducing the reliance on conventional grid electricity.

[021] In accordance with an embodiment for the present invention, an integral element of this innovative charger is the incorporation of radical artificial intelligence (AI) interfaces or algorithms. These AI interface work tirelessly to monitor energy production in real-time, assess the energy requirements of the connected electric vehicle, and dynamically adjust the charging parameters to optimize the use of renewable energy sources. The

charger continuously analyses data to make precise and efficient charging decisions.

[022] In accordance with an embodiment for the present invention, to ensure a seamless and user-friendly experience, the present invention is equipped with an intuitive user interface. Users can effortlessly configure charging preferences, monitor the status of ongoing charging sessions, and receive real-time updates. The system is designed to adapt to user preferences and prioritize user-defined parameters, ensuring a personalized and convenient EV charging experience.

[023] By directly harnessing solar and renewable energy sources, the charger significantly reduces the carbon footprint associated with EV charging. It promotes a cleaner and more environmentally responsible mode of transportation. The charger's AI-driven optimization ensures that renewable energy resources are utilized to their maximum potential, enhancing efficiency and sustainability. The charger's portability offers the flexibility to charge EVs in a wide range of settings, including remote areas, outdoor events, and emergency situations. The user-centric design puts control in the hands of EV owners, allowing them to tailor their charging experience to their preferences and priorities.

[024] It is to be understood that the above description is intended to be illustrative, and not restrictive. For example, the above-discussed embodiments may be used in combination with each other. Many other embodiments will be apparent to those of skill in the art upon reviewing the above description.

[025] The benefits and advantages which may be provided by the present invention have been described above with regard to specific embodiments. These benefits and advantages, and any elements or limitations that may cause them to occur or to become more pronounced are not to be construed as critical, required, or essential features of any or all of the embodiments.

5

[026] While the present invention has been described with reference to particular embodiments, it should be understood that the embodiments are illustrative and that the scope of the invention is not limited to these embodiments. Many variations, modifications, additions and improvements to the embodiments described above are possible. It is contemplated that these variations, modifications, additions and improvements fall within the scope of the invention.

10

We Claim:

1. A method for optimizing the charging of electric vehicles using a portable solar and renewable energy EV charger, comprising:

5 a. Monitoring the real-time energy production from solar and renewable energy sources;

b. Analyzing the energy requirements of an electric vehicle and the available energy resources;

10 c. Utilizing artificial intelligence to adjust the charging parameters of the EV charger to optimize the use of renewable energy sources and efficiently charge the electric vehicle.

2. The method as claimed in claim 1, further comprises incorporating user preferences, electricity grid data, and weather forecasts into the artificial intelligence algorithm to make real-time charging decisions.

15 3. The method as claimed in claim 1, consist of adapting the charging process to the changing availability of solar and renewable energy resources.

20 4. An apparatus for optimizing the charging of electric vehicles using a portable solar and renewable energy EV charger, comprising:

a. A portable EV charger with solar panels and connections to renewable energy sources;

b. A plurality of sensors for monitoring the real-time energy production from solar and renewable energy sources;

- c. An artificial intelligence module for analyzing energy requirements, user preferences, grid data, and weather forecasts; and
- d. A Control mechanism for adjusting the charging parameters of the EV charger to optimize the use of renewable energy sources and efficiently charge the electric vehicle.

5

5. The apparatus as claimed in claim 4, further comprises a user interface for configuring charging preferences and receiving real-time charging status updates.

10 6. The apparatus as claimed in claim 4, includes a communication module for connecting with the electricity grid and other energy sources.

7. The apparatus as claimed in claim 4, wherein a weather monitoring system is implemented for predicting energy production from solar panels and renewable sources.

15

Dated this 19th day of October 2023

Applicant

Brainware University, Kolkata



**Registrar
Brainware University
Barasat, Kolkata- 700125**

Signature:

Name: Mahua Pal

20

ABSTRACT

**AI-OPTIMIZED PORTABLE SOLAR AND RENEWABLE ENERGY EV
CHARGER**

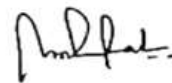
5 [027] This invention presents an AI-Optimized Portable Solar and
Renewable Energy EV Charger. The present invention comprising of
detecting the rapid energy generation from solar and renewable energy
sources. Assessing the energy demands of an electric vehicle in conjunction
with the accessible energy resources and employing artificial intelligence to
modify the charging settings of the EV charger for the purpose of enhancing
10 the utilization of renewable energy sources and the efficient charging of the
electric vehicle. The present invention further encompasses the integration
of user preferences, data from the electricity grid, and weather-related
forecasts into the artificial intelligence interface to facilitate real-time charging
determinations.

15 Accompanied Drawing [FIG. 1-2]

Dated this 19th day of October 2023

Applicant

Brainware University, Kolkata



**Registrar
Brainware University
Barasat, Kolkata- 700125**

Signature:

Name: Mahua Pal

20


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).	We, Brainware University, Kolkata having office at, 398, Ramkrishnapur Rd, Near Jagadighata Market, Barasat, Kolkata, West Bengal 700125.
------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------

2. Name, address and nationality of the joint applicant.	<p>(i) that I/We have not made any application for the same/substantially the same invention outside India</p> <p>Or</p> <p>(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:</p>
----------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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	<p>(iii) that the rights in the application(s) has/have been assigned to none</p> <p>..... that I/We undertake that upto the date of grant of the patent by the Controller, I/We would keep him informed in writing the details regarding corresponding applications for patents filed outside India within six months from the date of filing of such application.</p> <p style="text-align: right;">Dated this 19th day of October 2023</p>
-------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>4. To be signed by the applicant or his authorized registered patent agent.</p>	 Registrar Brainware University Barasat, Kolkata- 700125 Signature: Name: Mahua Pal
<p>5. Name of the natural person who has signed.</p>	<p>Brainware University, Kolkata Name of the Applicant</p>
	<p>To The Controller of Patents, The Patent Office, at Kolkata</p>
<p>Note.- Strike out whichever is not applicable;</p>	

An apparatus for optimizing the charging of electric vehicles using a portable solar and renewable energy EV charger

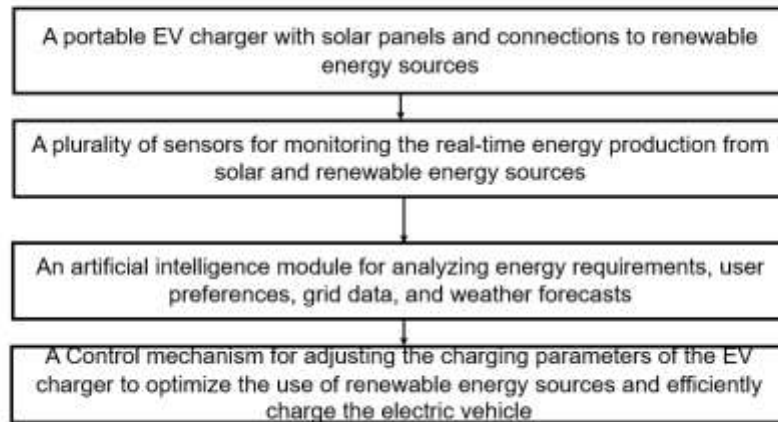


Figure. 1

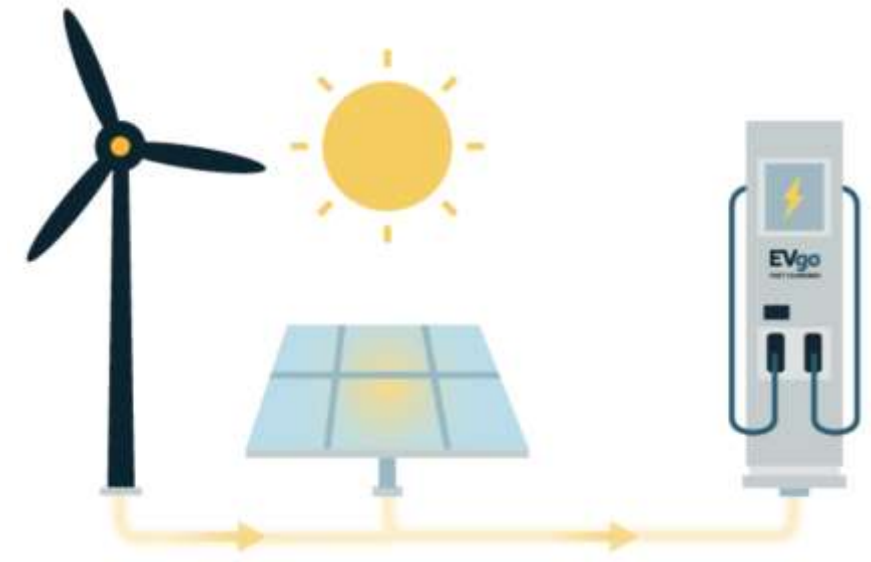


Figure. 2

Dated this 19th day of October 2023

Name: Mahua Pal

**Registrar
Brainware University
Barasat, Kolkata- 700125**

Signature:

Applicant Name: Brainware University, Kolkata

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)

We, **Brainware University, Kolkata** having office at, 398, Ramkrishnapur Rd, Near Jagadighata Market, Barasat, Kolkata, West Bengal 700125.

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 19-10-2023 is/are

2. INVENTOR(S)

(a) NAME	(b) NATIONALITY	(c) ADDRESS
1. Mr. Suvojit Mukhopadhyay	Indian	Assistant Professor, Computational Sciences Department, Brainware University, 398, Ramkrishnapur Rd, near Jagadighata Market, Barasat, Kolkata, West Bengal 700125
2. Dr. Gunjan Mukherjee	Indian	Associate Professor, Computational Sciences Department, Brainware University, 398, Ramkrishnapur Rd, near Jagadighata Market, Barasat, Kolkata, West Bengal 700125
3. Ms. Anindita Chakraborty	Indian	Assistant Professor, Computer Science and Engineering Department, Brainware University, 398, Ramkrishnapur Rd, near Jagadighata Market, Barasat, Kolkata, West Bengal 700125
4. Dr. Jayanta Aich	Indian	Associate Professor, Computational Sciences Department, Brainware University, 398, Ramkrishnapur Rd, near Jagadighata Market, Barasat, Kolkata, West Bengal 700125

5. Dr. Mahamuda Sultana	Indian	Associate Professor, Computer Science and Engineering Department, Guru Nanak Institute of Technology, 157/F, Nilgunj Rd, Sahid Colony, Panihati, Kolkata, West Bengal 700114
6. Dr. Suman Bhattacharya	Indian	Associate Professor, Computer Science and Engineering Department, Guru Nanak Institute of Technology, 157/F, Nilgunj Rd, Sahid Colony, Panihati, Kolkata, West Bengal 700114
7. Dr. Debasree Saha	Indian	Associate Professor, Electrical Engineering Department, Guru Nanak Institute of Technology, 157/F, Nilgunj Rd, Sahid Colony, Panihati, Kolkata, West Bengal 700114
8. Mrs. Shikha Biswas	Indian	Assistant Professor, Computer Science and Engineering Department, Kalyani University, Block C, Nadia, Kalyani, West Bengal 741235

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

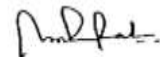
N.A.

~~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 19th day of October 2023

Applicant

Brainware University, Kolkata



Registrar

Brainware University

Barasat, Kolkata- 700125

Signature:

Name: Mahua Pal

To,
The Controller of Patents
The Patent Office, Kolkata

FORM 9

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

REQUEST FOR PUBLICATION

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

I/We **Brainware University, Kolkata** hereby request for early publication of my/our [Patent Application No.]
TEMP/E-1/84642/2023-KOL

Dated **19/10/2023 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 Kolkata

This form is electronically generated.