(12) PATENT APPLICATION PUBLICATION   (21) Application No.202311038754 A

(19) INDIA

(22) Date of filing of Application :06/06/2023   (43) Publication Date : 07/07/2023

(54) Title of the invention : SYSTEM TO DETECT AND MITIGATE FALSE DATA INJECTION ATTACKS (FDIA) IN DC MICROGRIDS

(51) International classification :G06F 215500, G06K 096200, H04L 471000, H04L 473400, H04L 691630
(86) International Application No :NA
     Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
     Filing Date :NA
(62) Divisional to Application Number :NA
     Filing Date :NA
	(71)**Name of Applicant :**
	  1)**Chitkara University**
	    Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala ----------- -----------
	  2)**Bluest Mettle Solutions Private Limited**
	Name of Applicant : NA
	Address of Applicant : NA
	(72)**Name of Inventor :**
	  1)**MISHRA, Rahul**
	Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune ----------- -----------
	  2)**PANDEY, Sakshi**
	Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune ----------- -----------
	  3)**GILL, Rupali**
	Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala ----------- -----------

(57) Abstract :
The present disclosure relates to a system (100) and method (300) to detect and mitigate false data injection attacks (FDIA) in DC microgrids. The system includes a processor (102) that instructs an artificial neural network (ANN) model to estimate a value of DC bus voltage for a DC microgrid and receives an input value of DC bus voltage from one or more users (114) through one or more computing devices (112). Additionally, the system compares the received input value of DC bus voltage and estimated value of DC bus voltage with a predetermined threshold value of DC bus voltage to enable identification of FDIA occurrence, matches compared values of DC bus voltages from the ANN model to identify and retrieve an inaccurate data caused by the FDIA and displays the inaccurate data caused by the FDIA to one or more users (114) on one or more computing devices (112).

No. of Pages : 25 No. of Claims : 10