

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202311043753 A

(19) INDIA

(22) Date of filing of Application :29/06/2023

(43) Publication Date : 21/07/2023

(54) Title of the invention : A RETROFIT MACHINE LEARNING BASED MILLING MACHINE

(51) International classification :E01C 230880, G06N 030800, G06N 050000, G06N 200000, G06N 202000  
(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 Rajpura -----

**2)Chitkara Innovation Incubator Foundation**

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

**1)Dr. Shivani Malhotra**

Address of Applicant :Department of Electronics & Communication Engineering, Chitkara University Institute of Engineering and Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -----

**2)Dr. Nitin Kumar Saluja**

Address of Applicant :Chitkara University Institute of Engineering and Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -----

**3)Dr. Gurjinder Singh**

Address of Applicant :Chitkara University Institute of Engineering and Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -----

**4)Dr. Debarshi Gosh**

Address of Applicant :Chitkara University Institute of Engineering and Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -----

(57) Abstract :

ABSTRACT A RETROFIT MACHINE LEARNING BASED MILLING MACHINE The invention relates to a retrofit machine learning based milling machine. The machine comprises: at least one hopper; at least one feeding device; at least one screening device; at least one motorized flour milling device; and at least one machine learning based sensing device configured with a processor. The at least one machine learning based sensing device comprises a plurality of sensors installed on the machine for collecting data on grains to be milled and parameters on machine performance and then feeding the collected data to the processor. The processor is capable to analyse the collected data by machine learning algorithms; and identify patterns in the collected data thereby make predictions for optimizing the performance of the machine at different real-time conditions. [Figure 1]

No. of Pages : 15 No. of Claims : 8