(19) INDIA

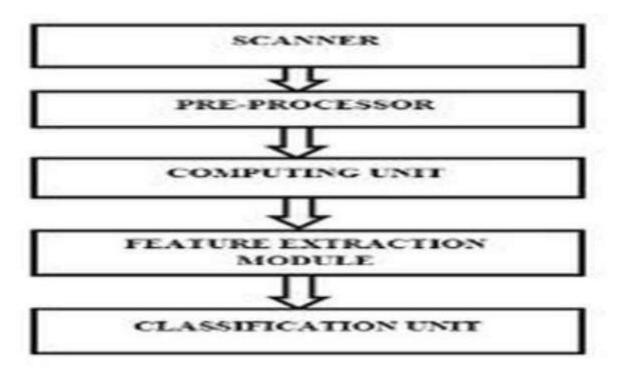
(22) Date of filing of Application :15/03/2020 (43) Publication Date : 17/09/2021

(54) Title of the invention: BILINGUAL HANDWRITTEN DIGIT RECOGNITION SYSTEM

(51) International classification	:G06K0009460000, G06K0009000000, G06K0009340000, G06K0009500000, G06K0009620000	(71)Name of Applicant: 1)CGC Technical Campus Jhanjeri Address of Applicant: State Highway 12A Jhanjeri, Sahibzada Ajit Singh Nagar, Punjab 140307, India. Punjab India (72)Name of Inventor:
(31) Priority Document No	:NA	1)Pooja
(32) Priority Date	:NA	2)Seema
(33) Name of priority country	:NA	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number Filing Date	:NA :NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	
(F7) A14		-

(57) Abstract:

A bilingual handwritten digit recognition system comprise of at least one scanner associated with the system for scanning image(s) related to bilingual digit(s), a pre-processor linked with the scanner that removes background, filter outs unwanted data from the image to smooth out and normalize the image, a computing unit connected with the pre-processor for converting the image(s) into binary image(s) and segmenting the binary image into isolated characters, a feature extraction module in association with the computing unit for extracting bilingual digit geometry and gradient feature(s) via an edge detection protocol from the isolated characters and a classification unit in connection with the module that have multiple layers and filters to map the feature(s) for classifying the feature(s) into appropriate groups via a local binary convolution neural network protocol.



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