

(54) Title of the invention : AN IMPROVED ADAPTIVE HUMAN-COMPUTER INTERACTION SYSTEM WITH MACHINE LEARNING INTERFACE

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| <p>(51) International classification :G06N002000000, G06F0003010000, G06F0009451000, G06N0007000000, G06F0040300000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p> | <p>(71)Name of Applicant :</p> <p>1)Dr. Santanu Koley Address of Applicant :S/o. Mr. Siba Prasad Koley, Professor, B1/4 Azad Hind Fort, Phase – I, Azad Hind Nagar, IOC Township, Haldia, Purba Medinipur - 721636, West Bengal, India. Haldia -----</p> <p>2)Dr. Sohail Saif</p> <p>3)Dr. Shibaprasad Sen</p> <p>4)Dr. Deepak Kumar</p> <p>5)Dr. Nabanita Das</p> <p>6)Dr. Brajesh Kumar</p> <p>7)Amarendra Kumar</p> <p>8)Susmita Biswas</p> <p>9)Subarna Roy</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor :</p> <p>1)Dr. Santanu Koley Address of Applicant :S/o. Mr. Siba Prasad Koley, Professor, B1/4 Azad Hind Fort, Phase – I, Azad Hind Nagar, IOC Township, Haldia, Purba Medinipur - 721636, West Bengal, India. Haldia -----</p> <p>2)Dr. Sohail Saif Address of Applicant :Late. Md. Saiful Islam, Assistant Professor, Maulana Abul Kalam Azad University of Technology, NH. 12, Haringhata, Nadia - 741249, West Bengal, India. Haringhata -----</p> <p>3)Dr. Shibaprasad Sen Address of Applicant :S/o. Late. Rabin Kumar Sen, Associate Professor, Department of Computer Science and Engineering, MCKV Institute of Engineering, 243, G T Road North, Liluah, Howrah - 711204, West Bengal, India. Howrah -----</p> <p>4)Dr. Deepak Kumar Address of Applicant :S/o. Shri. Raj Kumar, Professor, Department of Computer Science, Phonics Group of institutions, Roorkee - 247667, Uttrakhand, India. Roorkee -----</p> <p>5)Dr. Nabanita Das Address of Applicant :D/o. Mr. Bimal Das, Assistant Professor, Department of Computer Science and Engineering, Academy of Technology, Hooghly - 712121, West Bengal, India. Hooghly -----</p> <p>6)Dr. Brajesh Kumar Address of Applicant :S/o. Shri Binod Kumar Singh, Assistant Professor, Department of Electronics and Communication Engineering, Government Engineering College, Jamui - 811313, Bihar, India. Jamui -----</p> <p>7)Amarendra Kumar Address of Applicant :S/o. Mr. Bal Chadra Choudhary, Assistant Professor, Department of Electrical Engineering, Government Engineering College, Jamui - 811313, Bihar, India. Jamui -----</p> <p>8)Susmita Biswas Address of Applicant :D/o. Mr. Samaranjan Biswas, Associate Professor, Department of Cyber Science and Technology, Brainware University, 398, Ramkrishnapur Road, Near Jagadighata Market, Barasat - 700125, Kolkata, West Bengal, India. Barasat -----</p> <p>9)Subarna Roy Address of Applicant :D/o. Mr. Subhendu Kr Roy, Assistant Professor, Department of Electrical Engineering, JLD Engineering and Management College, Baruipur, South 24 Parganas, Kolkata - 700039, West Bengal, India. Kolkata -----</p> |
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(57) Abstract :
This invention pertains to an advanced Human-Computer Interaction (HCI) system that leverages cutting-edge machine learning algorithms to significantly enhance user experience and productivity. The system dynamically adjusts its interface and responses based on real-time analysis of user behavior, preferences, and emotional states. By integrating technologies such as natural language processing, computer vision, and predictive modeling, the system can intuitively understand and anticipate user needs, thereby reducing cognitive load and improving efficiency. Key components include a personalized interaction model, adaptive interface customization, and real-time emotional state detection. This innovative approach to HCI offers a robust solution for a wide range of applications, from personal computing to complex industrial systems, representing a substantial improvement over traditional static interfaces.

No. of Pages : 18 No. of Claims : 6