

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202531045774 A

(19) INDIA

(22) Date of filing of Application :13/05/2025

(43) Publication Date : 23/05/2025

(54) Title of the invention : AI-Based Intelligent Blended Education Framework with Real-Time Learning Path Optimization and Feedback Analytics

(51) International classification :G06Q0050200000, G09B0005000000, G09B0005020000, G09B0005060000, G06N0020000000

(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)Rahul Kumar Singh
 Address of Applicant :Patna. Bihar -----
2)Dr. Preeti rathi
3)Dr. Manish Kumar
4)Sanjeev Kumar
5)Komal Rani Tehlan
6)Suman
7)Dr. Vandna
8)Dr. Amit Chugh
9)Sony Kumari
 Name of Applicant : NA
 Address of Applicant : NA

(72)Name of Inventor :
1)Dr. Preeti rathi
 Address of Applicant :Assistant Professor, Department of CSE, School of Engineering and Technology, K. R. Mangalam University, Gurugram, Haryana, India, 122103. -----
2)Dr. Manish Kumar
 Address of Applicant :Assistant Professor, Department of CSE, School of Engineering and Technology, K. R. Mangalam University, Gurugram, Haryana, India, 122103. -----
3)Sanjeev Kumar
 Address of Applicant :Ph. D Scholar, CSE, UIET, Maharshi Dayanand University Rohtak, India, 124001. -----
4)Komal Rani Tehlan
 Address of Applicant :Assistant Professor, Gurugram University Gurugram, Haryana, India, 122003. -----
5)Suman
 Address of Applicant :Assistant Professor, Department of CSE, School of Engineering and Technology, K. R. Mangalam University, Gurugram, Haryana, India, 122103. -----
6)Dr. Vandna
 Address of Applicant :Assistant Professor, Department of CSE, School of Engineering and Technology, K. R. Mangalam University, Gurugram, Haryana, India, 122103. -----
7)Dr. Amit Chugh
 Address of Applicant :Associate Professor, CSE Department, IMS Engineering College, Ghaziabad, Uttar Pradesh, India, 201015. -----
8)Sony Kumari
 Address of Applicant :M.Ed Scholar, Advanced Institute of Education (AIE), Palwal, Haryana, India, 121102 -----
9)Rahul Kumar Singh
 Address of Applicant :Assistant Professor, Department of CSE, School of Engineering and Technology, Noida International University, Greater Noida, Uttar Pradesh, India, 203201. -----

(57) Abstract :
 The present invention provides an AI-based intelligent blended education framework that integrates online and offline learning environments with real-time learning path optimization and feedback analytics. It includes a dynamic learner profiling module that continuously captures and analyzes behavioral and performance data to personalize instructional content. An AI-powered recommendation engine suggests adaptive learning resources, while a feedback analytics module offers educators real-time insights to support targeted interventions. The system supports both synchronous and asynchronous learning modes and is designed for scalability, modularity, and integration with existing learning platforms. It enhances learner engagement, improves academic performance, and enables data-driven education through a secure and flexible architecture.

No. of Pages : 14 No. of Claims : 4