WORKSHOP: "Agentic AI for Personalized Learning: Exit Ticket Analysis and Task Design in Higher Education"

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Dr. Rashpinder Kaur (Plaksha University)

Dr. Rashpinder Kaur is an engineering educator with over 15 years of experience driving learning transformation through AI-enabled pedagogies, assessment research, and curriculum design.

Dr.Rashpinder Kaur is certified with a **Major in Artificial Intelligence from IIT, Ropar,** and has developed hands-on educational demos across reflex, model-based, goal-based, learning, hierarchical, and multi-agent systems, and has built applied AI solutions such as an agentic customer-support assistant during **her internship under Prof. Anish Roy Chowdhury at Plaksha University**.

She has also delivered workshops on personalized learning agents, exit-ticket analytics, gamified NLP learning, and AI-supported student engagement.

Her research spans AI in education, conceptual knowledge assessment, Rasch modeling, and outcome-based learning. She has authored multiple SCOPUS/SCI publications and contributed as a reviewer, workshop instructor, and organizing member across international engineering education conferences.

Dr. Rashpinder Kaur holds a PhD in Engineering Education and brings a forward-thinking, evidence-driven approach to making AI accessible, meaningful, and pedagogically sound for learners and educators.

This two-hour workshop focuses on implementing agentic AI to enhance student learning through the analysis of exit tickets in programming courses. Participants will learn how an intelligent agent can process exit ticket responses—highlighting students' areas of understanding and gaps—and accordingly design personalized tasks aligned with learning needs. The session will blend conceptual discussions of agentic AI in higher education with hands-on demonstration, empowering educators to integrate such agents into their teaching practice to respond dynamically to student queries and learning progress. This approach aims to optimize educator workload while fostering tailored learning paths, making it especially valuable in large classrooms or courses with diverse learner profiles.

Significance: Educators face challenges in addressing individual learning needs at scale, especially in introductory programming courses with large enrollments or varied student backgrounds. Exit tickets capture immediate feedback on student comprehension, but processing them manually is time-consuming. An AI agentic system that analyses exit tickets, identifies learning needs, and generates appropriate tasks offers an impactful solution to personalize learning support efficiently. This workshop reflects practical approaches to harnessing AI for dynamic task design, facilitating continuous, responsive teaching adaptations for introductory programming subjects.