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

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Dr. Preethi Baligar is currently an Associate Professor and Program Head of the B.Tech CSE (AI & ML) program at MIT Vishwaprayag University, Solapur, Maharashtra. She is an ACM member, Associate Editor for the *Journal of Engineering Education Transformations* (JEET), and serves on the governing body of the Research in Engineering Education Network (REEN) as the representative for the Indian subcontinent. Previously, she was an Associate Professor at KG Reddy College of Engineering and Technology, Hyderabad, and Director of the Centre for Engineering Education Research at KLE Technological University (2015–2024).

Dr. Baligar's expertise lies in developing large-scale undergraduate engineering courses in Artificial Intelligence, integrated programming courses design, interdisciplinary problem-solving, and design thinking for first-year students. She has extensive mentoring experience, including serving as a pedagogical mentor for the IUCEE Product Development Course across eight engineering institutes in India and as a PBL mentor in the pedagogical certificate program with Aalborg University, Denmark. She also developed a certificate program on Action Research for the Centre for Engineering Education Development at KG Reddy College of Engineering, Hyderabad.

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.