

# AI Systems Informed by Learning Engineering

<a href="#">A Predictive Learning Engineering Framework for Modeling Active Learning</a>
<a href="#">Adaptive Multi-Modal Deepfake Detection for Safer Learning Environments</a>
<a href="#">Agentic PAL: Designing Human-Empowered AI Partnerships for Early Childhood Mathematics Learning</a>
<a href="#">An Application of Design-Based Implementation Research to Develop a Framework to Support a Community of AI-experience Creators</a>
<a href="#">Automated Run-on Sentence Detection and Correction for Educational Writing</a>
<a href="#">Automatic Identification and Evaluation of Revisions in Student Writing Using Large Language Models</a>
<a href="#">Automatically Generating Interactive Learning Experiences with an LLM-Driven Agentic Pipeline</a>
<a href="#">Bridging Human Intelligence Augmentation (IA) and Classroom Practices via GenAI in Learning Engineering</a>
<a href="#">Charm-bots: The Impact of A.I.'s Sycophancy Language on User Trust</a>
<a href="#">Coaching, Not Autocomplete: Early Evidence from ConnectInk's AI-Supported Personal Narrative Pilot</a>
<a href="#">Comparing Epistemic Emotions and User Experience Across Two AI Instructional Designs in Biology Learning</a>
<a href="#">Currents of Inquiry: Insights From Two Years of Real-World AI-Learner Water Conversations</a>
<a href="#">Design and Pilot Evaluation of a Gamified Narrative Chatbot for STEM Education</a>
<a href="#">Designing for Student Engagement with AI in Courseware: Lessons from Iterative Improvements to DOT</a>

in REAL CHEM
EdLight Research Portal: An Expert-Annotated Repository of Handwritten Math Student Work
Epistemic Cognition and Uncertainty Navigation with a Domain-Specific AI Chatbot in STEM Education
From Course Concept to Lecture Video: An AI-Powered System for Automated MOOC Development
From Measurement to Action: A Learning Engineering Approach to AI-Powered Assessment for Human Power Skills Development
Implementing Concept Instruction via MCP Server
L2-French Learners and Generative AI (GenAI): Challenges, Needs, and Design Guidelines
Learning-By-Explaining with Generative AI: A Pilot Implementation in Introductory Biology
LLM Safety in an Educational Context: A holistic approach
Media Mentor AI: How a SCAMPER-guided AI assistant is helping reimagine media literacy learning
MIRANDA: Real-Time Learning Analytics for Authentic Embedded Assessment
Multiple-Document Comprehension in High School Science: A Learning-Engineering Pilot Study
NLP Validation of Prompt Strategies for Theory-Aligned LLM-Generated Personalization
Open Repository for AI Models as Learning Engineering Components
Optimizing Language-Focused Writing Feedback from Large Language Models through Prompt Engineering
Quality Assessment Through Learning Engineering: An Evaluation Rubric of LLM-Generated Multiple-Choice Questions
Reasoning LLMs are Competent Courseware Reviewers
ReQUESTA: A Hybrid Agentic Framework for Generating Cognitively Diverse Multiple-Choice Questions
Social and Emotional Dimensions of Generative AI Use
Socio-Emotional Learning in AI K-12 Guidance and Policy Documents: A Gap Analysis
The Difficult Conversations Bot: Findings on Fostering Empathy and Reflective Communication Among Faculty and Staff
The Writing Analytics Tool: A Learning Engineering Approach to Designing AI-Supported Writing Instruction
Towards Automated Detection of Struggling Student Programmers

User experience design of AI-assisted human-technology ecosystem for writing assessment

Using AI to Bridge Technology Gaps in Higher Education

