

# Reimagining Technical Assessments: What Educators Need in the Age of LLMs

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## Abstract

The rapid growth of Large Language Models (LLMs) is reshaping how technical skills are taught, practiced and evaluated in the current era. Educators can now use LLMs by automating the creation of diverse, context-aligned technical assessments, while learners get immediate and customized feedback. These capabilities also introduce new challenges, such as (i) exhaustion of API tokens or incurring high costs when relying on cloud-based LLMs to create large-scale technical assessments, and (ii) academic integrity in assessments where reasoning, efficiency and problem-solving under pressure are essential.

Building on these opportunities and limitations, local LLMs (self-hosted models) provide a new class of pedagogically aligned assessment mechanisms that integrate generative AI while preserving fairness. By adopting platforms that use local LLMs, educators can effectively generate domain-specific questions, enforce integrity controls, personalize difficulty levels and operate securely without relying on external cloud services. These platforms enable educators to self-host technical assessments, enforce integrity measures such as full-screen mode and copy-paste restriction and automatically evaluate student submissions using predefined answers or multiple programming languages. They also support seamless integration into classrooms, coding laboratories, competitions and hiring pipelines, lowering infrastructure barriers for organizations operating in resource-constrained environments.

As generative AI moves toward locally deployable LLMs, these capabilities become even more accessible and secure, offering organizations greater control over data and reduced operational cost. Local LLMs empower educators to generate domain-specific questions, simulate authentic industry challenges and personalize assessment difficulty without dependence on cloud-based services. Together, e-learning, generative AI and local LLMs provide a new shift toward adaptive, integrity-preserving and student-centered technical education. These platforms highlight the future direction of assessment, where AI amplifies pedagogical intent while ensuring that learning remains authentic, equitable and skill-driven.

**Keywords:** Education; LLMs; Teaching Needs; generative AI; Exercise generation