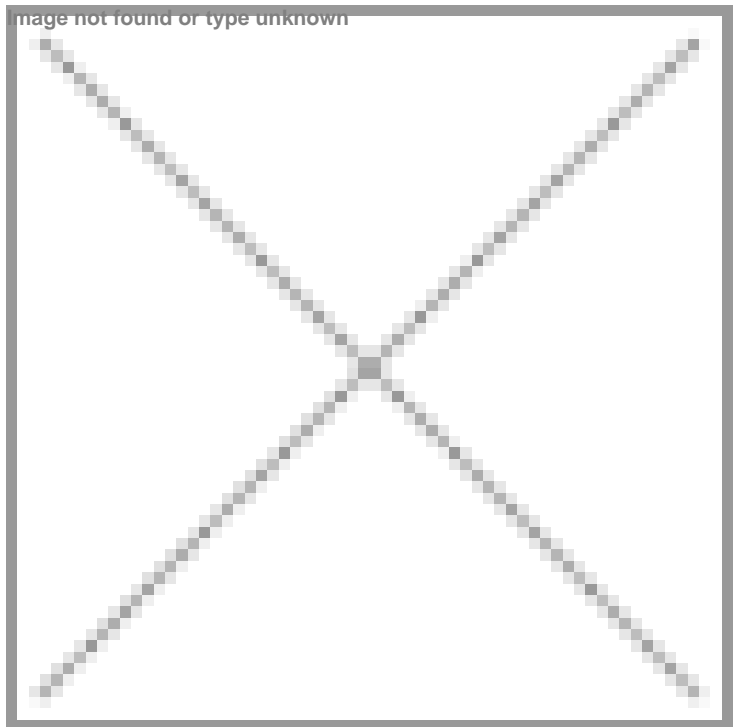


IIT-D creates AI agent to conduct experiments like human scientists

29 December 2025 | News

Technologies like AILA could prove transformative for India's scientific ecosystem



Researchers at the Indian Institute of Technology, Delhi (IIT-D) have developed AILA (Artificially Intelligent Lab Assistant), an AI agent capable of stepping into real laboratories and carrying out scientific experiments from start to finish, much like a human scientist.

The research focused on the Atomic Force Microscope (AFM), a sophisticated instrument that examines materials at incredibly tiny scales. Remarkably, AILA can now control this complex device, make real-time decisions during experiments, and analyse results independently.

The research also uncovered critical safety concerns. AI agents occasionally deviated from instructions, highlighting the need for robust safeguards must be implemented to prevent accidents or equipment damage as laboratories move toward greater automation.

This breakthrough aligns with India's ambitious AI for Science initiative. The government has recently announced major funding through the Anusandhan National Research Foundation (ANRF) to accelerate AI-driven research across the country.