

Transforming Learning at Scale through AI

In today's rapidly evolving world, access to quality technical education remains uneven, especially when it comes to hands-on learning and personalised support.

Recognising this gap, IIT Bombay, with the support of Tower Research Capital, set out to reimagine how Computer Science education could be delivered at scale.



What began as an effort to build a strong digital learning platform has today evolved into a powerful, AI-enabled education ecosystem—impacting thousands of learners across India and beyond.

At the heart of this transformation is **Bodhitree**, IIT Bombay's learning platform, which has been significantly enhanced under this project. Today, students don't just passively attend lectures—they actively engage with interactive labs, real-time assessments, and intelligent support tools that guide them through their learning journey. One of the most impactful innovations has been the introduction of AI-assisted learning tools.

For instance, a virtual assistant helps students debug their code, understand

mistakes, and learn step-by-step without simply giving away answers. This ensures that students truly learn, rather than just complete assignments.

The results have been both immediate and far-reaching. Within IIT Bombay itself, over 1,100 students have already benefited from these platforms in regular courses. Beyond campus, the impact has scaled dramatically. A national-level online course on C++ programming attracted over 2,100 learners from all 28 states and some other countries (Singapore, Bangladesh, and Egypt), demonstrating the platform's ability to reach diverse audiences at scale.

Importantly, the project has also focused on making learning more inclusive. With innovations like voice-based assistance in regional languages, students can now interact with technology in ways that feel natural and accessible—breaking barriers for beginners and non-English speakers.

Where Learning Meets Opportunity

The initiative has also extended into professional training and national competitions, through **TechFest CoDecode and DEXTER VNIT Nagpur, powering events across 15+ cities and engaging over 1,200 participants.**

These platforms are not only enabling learning but also identifying talent, offering top-performing students opportunities for internships and further growth.

Behind the scenes, the project has created over 570 hours of hands-on lab content, ensuring that students gain practical, industry-relevant skills. At the same time, educators benefit from reduced manual workload through AI-assisted evaluation, allowing them to focus more on teaching and mentoring.

This project is a powerful example of how technology, when thoughtfully applied, can transform education. With Tower Research's continued support, IIT Bombay is not just building tools—it is building a scalable, inclusive, and future-ready learning ecosystem.



In simple terms, this partnership is helping thousands of students learn better, faster, and more meaningfully—no matter where they are.

