



**PBR VISVODAYA INSTITUTE OF TECHNOLOGY & SCIENCE
(AUTONOMOUS)**

(Affiliated to J.N.T.U.A, Approved by AICTE and Accredited by NAAC)
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

INTERNET LABORATORY:

Despite many interventions, science education remains highly inequitable throughout the world. Internet-enabled experimental learning has the potential to reach underserved communities and increase the diversity of the scientific workforce. Here, we demonstrate the use of lab-on-a-chip (LoC) technologies to expose Latinx life science undergraduate students to introductory concepts of computer programming by taking advantage of open-loop cloud-integrated LoCs. We developed a context-aware curriculum to train students at over 8000 km from the experimental site. Through this curriculum, the students completed an assignment testing bacteria contamination in water using LoCs. We showed that this approach was sufficient to reduce the students' fear of programming and increase their interest in continuing careers with a computer science component. Altogether, we conclude that LoC-based internet-enabled learning can become a powerful tool to train Latinx students and increase the diversity in STEM.

HARDWARE Facility: CPU: INTEL CORE i5 3rd GEN PROCESSOR, M72 M/B, 4GB RAM, 500GB HDD, KEYBOARD .MOUSE, IBOLL CABINET, MONITOR: 18.5" LED, UPS

SOFTWARE Facility: INTERNET Tools, Wi-Fi, Latest Browsers.

LAB PHOTOS:

