

Indian State of Tamil Nadu Partners with Q-CTRL to Train the Quantum Workforce in the Region

Mandatory rollout aims to upskill millions of engineering students across Tamil Nadu and India in quantum computing, a critical technology

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[/EINPresswire.com/](https://EINPresswire.com/) -- The Indian state of Tamil Nadu and Q-CTRL, the global leader in quantum infrastructure software, today announced a partnership that kickstarts quantum education in India through a first-of-its-kind statewide rollout.

Q-CTRL's [Black Opal](#), an award-winning workforce development platform for learning quantum computing, will

become a mandatory learning module for engineering students within the Tamil Nadu Skill Development Corporation's (TNSDC) Naan Mudhalvan Upskilling Platform.

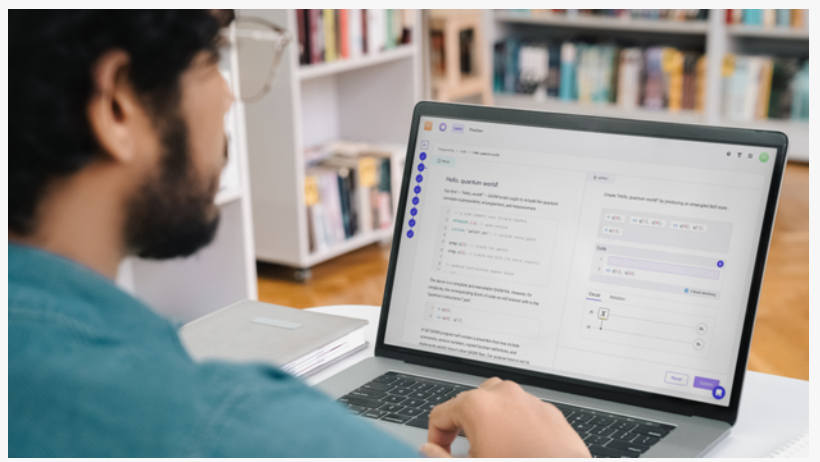
The global quantum workforce is drastically understaffed, as evidenced in a [McKinsey report](#) predicting that less than half of projected quantum computing jobs will be filled by 2025. To close the quantum skills gap, talent will need to be tapped from around the globe, and India will be a key contributor to building the quantum economy. This strategic collaboration aims to provide high-quality, hands-on quantum computing education to hundreds of thousands of university engineering students and recognizes Tamil Nadu as a leader in the burgeoning quantum technology industry.

Black Opal makes quantum computing accessible to all — from students to software engineers, and developers to executives — through an interactive and visual online platform in which browser extensions can provide immediate language translation. Black Opal is designed to equip all learners for the quantum era with everything they need to join the quantum industry, which is expected to become a trillion-dollar sector over the next decade, according to McKinsey.



Pictured: Second from left: Tmt J. Innocent Divya, I.A.S., Managing Director of Tamil Nadu Skill Development Corporation; and third from left: Aravind Ratnam, Chief Strategy Officer of Q-CTRL.

"Naan Mudhalvan is a government flagship program with a vision to upskill the youth of Tamil Nadu as we march into a trillion-dollar economy. Our partnership with Q-CTRL to roll out state-of-the-art quantum computing education in Tamil Nadu fuels our synergy with the industry, aiding in creating the talent pool that will feed into the industry and ramp up investment in the state," said Tmt J. Innocent Divya, I.A.S., Managing Director of Tamil Nadu Skill Development Corporation.



The Black Opal Platform

"Q-CTRL is proud to be making history in India through our partnership with Tamil Nadu which has become the first state in the world to roll out quantum computing education to all technical degree programs," said Aravind Ratnam, Chief Strategy Officer at Q-CTRL. "Through our award-winning education platform, hundreds of thousands of students within TN will be upskilled over the next few semesters. Together we are creating the next generation of developers across the world."

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Aravind Ratnam, Chief Strategy Officer at Q-CTRL

Q-CTRL has brought on Quantum AI Global as a service provider to roll out this account and proliferate quantum technology to make India competitive in the global quantum workforce.

“We are excited to partner with Q-CTRL to execute the pioneering project with the state of Tamil Nadu. This partnership will serve as a blueprint for other regions and highlights our shared commitment to cultivate a diverse, inclusive, and accessible quantum education program. This collaboration aims to integrate cutting-edge quantum education into Tamil Nadu's technical degree programs and empower students with skill enhancement and growth opportunities,” said Sanjay Chittore, Founder & CEO of Quantum AI Global.

The Black Opal platform features interactive learning modules, open-world practice areas, shareable skill badges, and completion certificates for learners. Black Opal provides all relevant material for an introductory quantum computing course in a single software platform, covering everything from basic quantum principles through to the specialized programming techniques used in quantum computing, all through a visual interface. The platform also empowers

students to master both theoretical and practical quantum computing skills through simulated hackathon activities.

Instructors can tailor their students' learning journeys on Black Opal through the Content Assignment feature, allowing for course customization, cohort management, and progress monitoring. This enables educators to align the curriculum with specific learning outcomes, create tailored assignments, and monitor student success through detailed analytics. Instructors can use Black Opal's interactive content to build an unlimited number of assignments, which can be easily configured and tracked using visual dashboards and supported by exportable analytics, enabling educators to enhance student performance.

Building on Q-CTRL's existing educational partnerships, this collaboration reflects the shared priority of advancing diversity, equity, inclusion, and accessibility in the quantum technology ecosystem. Coupled with Q-CTRL's initial [partnership with the Quad Investors Network \(QUIN\)](#), this new partnership with Tamil Nadu demonstrates Q-CTRL's commitment to bringing accessible quantum education to Quad countries (Australia, India, Japan, and the US).

About Q-CTRL

Q-CTRL's quantum control infrastructure software for R&D professionals and quantum computing end users delivers the highest performance error-correcting and suppressing techniques globally and provides a unique capability accelerating the pathway to the first useful quantum computers and quantum sensors. Q-CTRL operates a globally leading quantum sensing division focused on software-level innovation for strategic capability. Q-CTRL also has developed Black Opal, an edtech platform that enables users to quickly learn quantum computing.

Founded by Michael J. Biercuk in 2017, Q-CTRL has pioneered the quantum infrastructure software segment and has become the leading product-focused software company in the broader quantum sector. Q-CTRL has been an inaugural member of the IBM Quantum Network startup program since 2018, and its performance management software now runs natively on IBM quantum computers. The company has international headquarters in Sydney, Los Angeles, Berlin, and Oxford.

About Tamil Nadu Skill Development Corporation (TNSDC)

Tamil Nadu Skill Development Corporation (TNSDC), established in 2013 by Government of Tamil Nadu, is the Nodal Agency for the State Skill Development Mission (SSDM), committed to advancing the skills of our youth in alignment with the objectives of Ministry of Skill Development and Entrepreneurship (MSDE), Government of India and National Skill Mission.

Our flagship program, "Naan Mudhalvan" (I am the best) under TNSDC, launched on 1st March 2022 by the Honourable Chief Minister of Tamil Nadu, is a transformative initiative shaping higher education in Tamil Nadu. This program aims to skill over 10 lakh students annually by integrating advanced technology skills into the curricula of engineering, arts and science

colleges, polytechnics, etc.

In the past two years, TNSDC has trained around 37.2 lakh students and more than 60,294 faculties across 2085 institutions in diverse skills and deep-tech courses like Artificial Intelligence, Machine Language, Robotics, IoT, Digital Marketing, Cybersecurity, Data Analytics, Cloud Computing etc., and thus aligning with industry opportunities to enhance job readiness of the youth community.

Luke Keding

HKA Marketing Communications

+1 315-575-4491

[email us here](#)

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