Announcements

IBM outlines commitment to developing the Quantum ecosystem in India More than 1,400 students trained on Qiskit

New Delhi, December 16, 2020: IBM today outlined its commitment to grow a quantum ready workforce and build an ecosystem to nurture the quantum community in India.

With the announcement of the National Mission on Quantum Technologies and Applications, interest in quantum computing has been surging in India and it is an opportune time to make it ubiquitous and accessible to a diverse audience to unlock its true potential. Since making the quantum computer accessible via the cloud in 2016, IBM has focused on developing an ecosystem of developers, scientists, educators, and professionals through open-source access to its real quantum hardware and software (Qiskit is an open-source quantum software development kit built by IBM).

Given India's demographic dividend it has the potential to be a leading source of quantum computing skills and IBM has been driving numerous initiatives to build and grow quantum community in India. The Global IBM Quantum Challenges, Qiskit Global Summer School, and Qiskit Challenge India have witnessed a growing interest and participation from quantum enthusiasts in India.

Over 1,100 participants registered for the two-week long Qiskit Challenge India, of which 67% were first time users of Qiskit, and the majority of them were undergraduates. During the challenge participants were introduced to quantum computing fundamentals and then tasked to apply the learning to address an open problem in the field of quantum machine learning. Today, there are 1,400 students trained on Qiskit in India, in addition to Qiskit Advocates, who are actively assisting and contributing to the Qiskit community.

Gargi Dasgupta – Director, IBM Research India said, "*India was selected as a growth market for IBM Quantum due to the growing interest and investment in quantum computing. However, for India to have a leading role in the new quantum industry, concerted efforts are required to bring together industry, academia and government across skills, training, research, technology access, industry, and economy. IBM aims to advance the quantum ecosystem in India by hosting skill-building programs like Qiskit Challenge India which are open to all, and Qiskit India Professor Meetup by providing access to educational resources, software as well as real quantum hardware, accessible over the IBM Cloud*."

Abe Asfaw - Global Lead, Quantum Education and Open Science at IBM Quantum, said – "*Students in India have made an outsized contribution to our global Qiskit activities this year. For example, almost 1,000 students from India attended our 2020 Qiskit Summer School, and participants from India routinely participate in our live research seminars streamed on YouTube, where we discuss the latest in the research*".

"*And contributors from India continue to shape our learning materials, submitting edits and input to the Qiskit textbook, and routinely responding to requests for feedback as we continue to build better educational materials and tools. As we develop more training focusing on quantum computing applications, we anticipate that learners in India will continue to participate and refine the material with us – helping new learners and the existing workforce get 'quantum ready'*."

Anamita Guha, Global Product Lead, IBM Quantum & Qiskit, said – "*Our growth team has seen unprecedented enthusiasm in quantum computing and Qiskit from India, and has eagerly supported this*

burgeoning quantum community. We're excited to continue offering opportunities like hackathons, contests, and professor meetups, to build the foundation of a quantum ecosystem that we hope will make India a global leader in this exciting field."

IBM now has more than **130** organizations on the IBM Quantum Network (including Fortune 500 companies, academic institutions, Research labs, and startups), who have access to more than **30** different quantum computers deployed since 2016, and an active community of more than **280,000** registered users, who run more than one billion quantum circuits on these systems every day for research and industry use cases.

IBM recently unveiled its Quantum Roadmap with a suite of increasingly advanced quantum processors, with the goal of deploying a 1,121-qubit system by 2023, which IBM sees as an inflection point that will mark our ability to implement error correction and scale up our devices, while simultaneously be complex enough to explore potential Quantum Advantages—problems that we can solve more efficiently on a quantum computer than on the world's best supercomputers. From computer science courses to chemistry and business studies, students need to become familiar with this technology in order to consider career paths rooted in quantum computing. The possibilities that the quantum era offers are profoundly exciting, and it needs far greater participation to leap forward – building a pipeline of talent with the right set of skills is a forward step.

About IBM Quantum

IBM Quantum is an industry-first initiative to build commercial universal quantum systems for business and science applications. For more information about IBM's quantum computing efforts, please visit https://www.ibm.com/quantum-computing/

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