



**ASSAM UNIVERSITY
SILCHAR**

TWO-DAY WORKSHOP

ON

QUANTUM COMPUTING

AND

MACHINE LEARNING

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Target Audience:

Faculty

Students (UG/PG)

Research Scholars

Industry Professionals/ Academic Professionals

CHIEF PATRON

PROF. RAJIVE MOHAN PANT

*Hon'ble Vice Chancellor
Assam University, Silchar*

PATRONS

PROF. DEBAPRASAD DAS

Dean
Triguna Sen School of Technology,
Assam University, Silchar

PROF. SUDIPTA ROY

Head of the Department
Computer Science and Engineering,
Assam University, Silchar

ORGANISING

COORDINATORS

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Computer Science and Engineering,
Assam University, Silchar

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Assistant Professor
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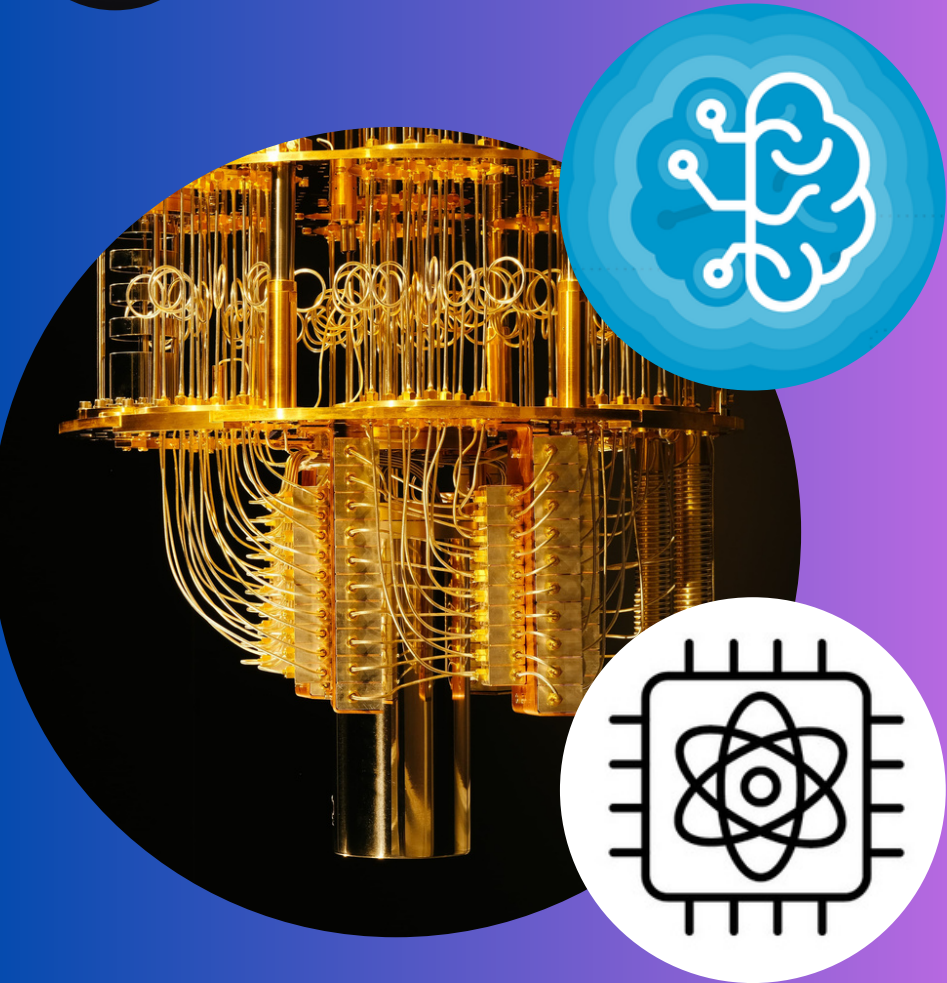


ASSAM UNIVERSITY,
SILCHAR

In association with



QUANTUM AI
GLOBAL



TWO-DAY WORKSHOP
ON
QUANTUM COMPUTING
AND
MACHINE LEARNING

**RESOURCE PERSON OF
THE WORKSHOP**

Dr. Avinash Chalumuri

*Associate Professor, Dept. of CSE,
GVPCE(A), Visakhapatnam*

Mr. Bibhav Raj

*Quantum Design Scientist,
Quantum AI Global, Hyderabad*

Dr. Rajeeb Dey

*Associate Professor,
Department of Electrical Engineering,
National Institute of Technology,
Silchar, Assam*



29th to 30th of November, 2023



10:00 AM



**Department of Computer
Science and Engineering,
TSSOT,
Assam University, Silchar**

**ABOUT
THE WORKSHOP**

The Quantum Computing and Machine Learning Workshop aims to offer participants a comprehensive grasp of the foundational principles at the intersection of quantum computing and machine learning. Throughout the workshop, attendees will delve deep into the core concepts of quantum computing, encompassing essential topics such as linear algebra, qubits, quantum gates, and quantum circuits. They will not only understand the theory but also explore practical applications, including the intriguing phenomena of superposition and entanglement that form the basis of quantum algorithms and computational models. Furthermore, the workshop will equip participants with the knowledge and skills to work with quantum machine learning, including hybrid quantum-classical circuits, variational circuits, and quantum neural networks. To enhance the learning experience, attendees will have the opportunity to gain hands-on experience using the PennyLane platform for quantum computations and even run algorithms on the IBM Quantum Experience. Lastly, the workshop will address the crucial subject of reversible computation, shedding light on the significance of post-quantum cryptography, which is paramount for ensuring security in the era of quantum computing.