



# ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP) on

## Quantum Machine Learning (QML – 2026)

(6<sup>th</sup> July – 11<sup>th</sup> July 2026)

Organized by

Electronics & ICT Academy (Hub), NIT Warangal

In association with

NIT Raipur, Raipur – 492010, Chhattisgarh

Sponsored by

Ministry of Electronics and Information Technology (MeitY), GoI



This Faculty Development Programme (FDP) on Quantum Machine Learning (QML) is designed to provide a comprehensive understanding of the integration of quantum computing with modern machine learning techniques. The programme begins with essential foundations in classical machine learning, followed by in-depth coverage of quantum computing and essential topics to strategically study the quantum machine learning. Participants will explore advanced QML paradigms, including quantum data encoding, feature maps, kernel methods, and hybrid quantum-classical architectures. The FDP further emphasizes variational quantum circuits, and their applications in design of quantum supervised and unsupervised learning tasks. Practical exposure through Qiskit-based hands-on sessions will enable participants to implement QML models on real & toy datasets. The programme also addresses current challenges, NISQ advancements, and emerging insights in Quantum Deep Learning (QDL) and Quantum AI (QAI). This programme is useful for faculty members, researchers, and professionals wishes to explore next-generation intelligent technologies.

### How to Apply:

Participants are required to fill out the online registration form by clicking on the following link: <https://tinyurl.com/QML2026>

### Selection Criteria:

Selection will be done based on first-come-first-serve basis to a preferable maximum number of 40 (forty). Candidates will be issued satisfactory certificates on successful completion of the course.

### Important Dates:

Last date (Application)	03.07.2026
Selection List by E- mail	04.07.2026
Duration	06.07.2026 to 11.07.2026

### About NIT Warangal:

National Institute of Technology, Warangal, is the first among 17 RECs set up as a joint venture of the Government of India and the state government. Over the years, the college has established itself as a premier Institute imparting technical education of a very high standard, leading to B.Tech degrees in various branches of engineering, M.Tech., and Ph.D. programs in various specializations. All B. Tech and M. Tech programs of NIT Warangal are NBA accredited.

### About NIT Raipur:

National Institute of Technology (NIT) Raipur, formerly known as Government Engineering College (GEC) Raipur, was established in 1956. The institute has established its unique identity for the development of high-quality human and knowledge resources. It was declared as 'National Institute of Technology' by the Government of India on 1st December 2005 and then an 'Institute of National Importance' in May 2007 vide the National Institute of Technology Act 2007. NIT Raipur now offers 12 UG and 16 PG programs. In addition to the UG and PG programs, NIT Raipur also offers Ph.D.in 18 disciplines of science and technology. For more details, please visit us at [www.nitr.ac.in](http://www.nitr.ac.in).

### FDP Coordinators:

<b>Dr. Earnest Paul Ijjina</b> Assistant Professor, Department of Computer Science and Engineering (CSE), National Institute of Technology Warangal (NITW) Email id: <a href="mailto:iep@nitw.ac.in">iep@nitw.ac.in</a> Mob. No: (+91) 94944-66490	<b>Dr. Kapil Kumar Soni</b> Assistant Professor, Department of Information Technology (IT), National Institute of Technology Raipur (NITRR) Email id: <a href="mailto:kksoni.it@nitr.ac.in">kksoni.it@nitr.ac.in</a> Mob. No: (+91) 99934-51386
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### Major Course Content:

- QML Foundations: Classical Machine Learning Basics and Requisites, Quantum Data Representation & Quantum Computing Fundamentals.
- Quantum Logic Gates and Operations, Quantum Designs – QAA, QPE, HHL, Quantum Circuit Processing, Qiskit Programming for the QML.
- QML Significance, QML Architecture and Paradigms, Quantum Data Encoding, Quantum Feature Map & Kernel, QML Toolkit and Method.
- Variational Quantum Algorithms / Circuits (VQC), VQE, Hybrid QML Algorithms, QML for Toy Dataset / Problems, Quantum Supervised and Unsupervised Learning – Classification, Regression, & Clustering.
- QML Challenges and Applications. QML Advancements under NISQ, QDL & QAI Insights, Hands-on Session(s) using Qiskit Programming.

### Faculty conducting this Programme:

The program will be conducted by the faculty members of NIT Warangal and NIT Raipur. Academicians and domain experts from IITs/NITs/IITs are invited to deliver lectures in a program. Speakers from industries are also expected to deliver the practical sessions as part of the course.

### Fee Particulars

Participants need to pay the Registration Fee Online using the following details:

Faculty	Rs. 500/-
Industry Participants	Rs. 2250/-

### Online Transfer Details

Account Name : **Electronics & ICT Academy NITW**  
Account No : **62423775910**  
IFSC : **SBIN0020149**  
Bank & Branch : **State Bank of India, NIT(REC), Warangal**